This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

1837
ARTES VERITAS SCIENTIA
LIBRARY OF THE
UNIVERSITY OF MICHIGAN
TUEBOR
SI QUAERIS PENINSULAM AMOENAM
CIRCUMSPICE

S
1
A5

THE

AMERICAN

AGRICULTURIST;

DESIGNED

TO IMPROVE THE PLANTER, THE FARMER, THE STOCK-BREEDER,
AND THE HORTICULTURIST.

> AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE
> MOST NOBLE EMPLOYMENT OF MAN.—WASHINGTON.

A. B. ALLEN, EDITOR.

VOL. III.

NEW YORK:
PUBLISHED BY SAXTON & MILES,
205 BROADWAY.

1844.

C.S.
Nijhoff
6-16-27
14540

CONTENTS OF VOLUME III.

Under the heads of "Calendar," "Agricultural Shows," and "Reports," many valuable articles will be found on gardens, crops, method of cultivation, products, and animals, which we have placed under distinct heads.

A.
Page.
Advice, Finding Fault..........................308
Agricultural Societies and Shows—Benefit of.....156
  N. Y. State, Annual Meeting of.............8, 40
    " Notice of.....................40, 145
    " An. Report and Election of Officers..87
    " List of Premiums for 1844....146, 150
    " Regulations, &c.............150, 151
    " Transactions for 1843............190
    " Program. and Additional Premiums.281
    " Descrip. of Show at Pokeepsie....293
    " Premiums awarded 296
    " Circular for Meeting in Jan. 1845..345
    " Assembly Report of..............126
  Worcester County, Transactions of.............62
  Essex " " " 94
  New Castle " " " 94
  Hancock Planters' Club......................125
  and Mechanics' Association in Louisiana........125
  Jefferson College Agric'l, Hortic'l and Botan'l..197
  Royal Society of England....................283
  Yorkshire " " 316
  Highland " Scotland 316
  Queens County...............................327
  Benefit of..................................156
Agricultural Papers, Value of.........179, 286, 301
  " " Errors in.........134, 171, 249
  " " Criticisms of.............301
  " " Great Help in Reading.....341
  " Products of the United States........349
  " Survey in Ohio....................349
Agriculture, Essays on Practical................317
Alabama, Agriculture of.........................25
Almanac, Notice of American Agriculturist......193
Alpacas in England and Peru....................93
  " Scotland 252
American Farmers, Policy of...............338, 365
  " Institute N. Y. Report...............158
  " " Programme and Premiums offered.277
  " " Seventeenth Annual Show......326
  " " Premiums of..................356
  " Quarterly Jour. of Agricul. proposed...317
Ammonia, Sources of...........................187
Apples, to Preserve in Pits....................347
Arithmetic, Elementary........................285
Ashland, Description of........................35
Asparagus, Culture of..........................70
Australian Agriculture.........................317
Aviary, Description of....................16, 336

B.
Baby, a big one...............................349
Barley, great Produce of......................372
Beans, Culture of.............................131
Beef for the English Market...................124
Beer, Spruce to make..........................285
Bees, Statistics of.......................187, 348
  " Preserved from Moths.....................253
  " Economy of................................284
  " Hiveless...................................315
Birds, Useful to Fruit-Trees.....................72
  " Migration of..............................182
  " Protected on the Farm.....................259

Page.
Birds, Destroying Insects..................197, 251
Births, Premature.............................328
Blackberry Jelly...............................16
Blight in Pear-Trees..........................321
Bone-Dust and Sulphuric Acid as Fertilizers......251
Bone-Dust for Food............................284
Borer on Fruit-Trees...........................75
Boston Traveller...............................62
British American Cultivator....................125
Buckwheat, Method of Harvesting................292
Budding 208
Bugs, (see Insects.)
Butter, Quantity made from Milk.................8
  " Scalded Milk for............................8
  " Making in Orange County.......... .47, 237
  " from Sour Milk..............................51

C.
Cabbage Heads to raise from Stumps............156
  " " to Pickle.........................349
  " a Monster................................350
Calendar, Northern.... 26, 59, 89, 123, 152, 183, 218, 250, 275, 313, 346, 369
  " Southern.... 27, 60, 90, 122, 152, 186, 217, 249, 276, 314, 370
California, Travels in..........................94
Canary Seed, Manner and Profits of Raising......317
Cane Coverer, Description of...................157
  " Cutter, " 62
  " for Making Paper..........................157
Candles, to Make..............................156
Carbonate of Am. to Destroy Insects and Worms..197
Carbonic Acid, condensed by Charcoal 124
Carolina Planter, Notice of....................285
Castor Oil, Production of.......................62
Caterpillars, (see Insects.)
Cattle, Shelter for..............................5
  " Ayrshire, Origin of.......................41
  " " and Durham Bull Sheltie.......230
  " Devon, Character, Weights of......10, 11, 12
  " " Great Dairy Qualities of......94, 286
  " Durham or Short Horn—Hardiness of......45
  " " Mr. Gibbons'......................130
  " " Introduction into Spain..........155
  " " Sale of for England and Michigan.158
  " " Importation into France..........187
  " " Messrs. Lathrop's................194
  " " Polled Grade.....................198
  " " Extraordinary Milker.............284
  " " Mr. Vail's Lady Barrington desc..344
  " " Sales of in England.............347
  " " Bull Meteor.....................364
  " Hereford, Dairy Qualities of..............46
  " Yearlings, Management of..................40
  " Stock of Peter A. Remsen..................42
  " Gravel in Animals.........................48
  " Smithfield, Show of........................61
  " Breeding Bulls.............................61
  " Free Martins Breeders......................76
  " English Method of Fattening...............107
  " A Great Butter Cow...................125, 190
  " Taming a Savage Bull......................145

Page.
Cattle, Mr. Schenck's Polled Cow..............156
" to Prevent Injury to in fresh Pea-Fields...156
" to Kill Lice on..........................177
" Fatting Steers..........................184
" Large Cow................................187
" Three Calves at one Birth...............187
" Organic Improvement of..................211
" Prolific Cows.....................219, 315
" Warbles, Cure for.......................219
" Doctor, every Man his own...............254
" English, Exported to Russia.............283
" Remedy for Hove in......................284
" Directions for Fattening................328
" Management for the South................341
" Care of Young Stock.....................354
" in Western Australia....................371
Cauliflower, Large...........................219
Charcoal and its Uses.................108, 124, 125
Cheese, Dutch, to make..........................83
" Importation into England................187
" Benefited by the Oil in Milk............253
" Process for making......................274
Chess, Remarks on........................14, 140
Chemical Solution for Seeds...................324
" and Physical Balance of Nature..........222
Chemistry Agricultural, Lectures on.........40, 329
" Elements of.............................125
" as Exemplifying the Wisdom of God.......254
" Agricultural...........134, 171, 200, 243
Clay Lands for Grass..........................307
Clearing Forest Lands, Mode and Expense of.....174
Coal Tar, Substitute for Paint................248
Cockle-Burr, Poisonous to Hogs................318
Cocus on Orange-Trees, Remedy for..............69
Coffee, Culture of..............................14
Colleges, Agricultural.............52, 187, 124, 283
Colman's European Agric. Tour...189, 284, 317, 374
Comfrey Root (Symphytum), Great Value of.......62
Concordia Intelligencer noticed................30
Conservatory, Mr. Valk's noticed..............196
Corn, Egyptian..............................7, 265
" to preserve from Spring Frosts..........157
" for Fodder, Culture of..................161
" for Sugar...............................162
" Odd Rows in.................167, 305, 324
" Trial of in England.....................251
" Molasses from Stalks....................253
" for Soiling and Fodder..................312
" Green Pudding, to make..................318
" Sheller..................................343
" Bread, to make...........................349
" Culture on Cane-Land....................349
Correspondents, Hints to......................126
Cotton, Topping,................................77
" Large Increase of Stock..................124
" Character of the Plant..................156
" Memoir on...............................190
" Premium..................................221
" Culture of Sea Island...................244
" Gin, Proposed Improvement of............337
Cranberries, Cultivation of................54, 79
" Great Yield of..........................374
Crows, White..................................283
Cultivation of Cleared Lands.....................3
Curculio, Remedy for..............80, 190, 221, 286
Currant-Trees, Early Standard..................93
Cuttings, to Propagate........................251

D.

Dahlia Tree...................................110
Dairy, a Pennsylvania.........................178

Page
Dana, Review of........................200, 243
Deer, Management of...........................300
Dis's in Fruit Trees, &c. (see F't Trees, Cal'ders, &c.)
Diseases in Animals—Cure for Mange in..........61
Cure for Hoven in Sheep.....................66
" " in Cattle............................284
" Scab, &c., in Sheep.......................66
" Mad Itch.................................150
" Sore Teats in Cows.......................190
" Overeating Apples........................262
" Dogs and Cats............................340
Dogs, Shepherd, described......................76
" Mexican, "..............................241
" and Cats, Diseases of in the South......340
Downing's Highland Nurseries, noticed..........97
Draining Swamp Lands...........................55
" Description and Implements for..........112
Duck, Extraordinary...........................284
Duties on Rice, Lard, and Tobacco..............155
Dysentery, Ripe Fruits cure for...............349

E.

Eclectic Magazine, Notice of..................374
Education, a Farmer's.................2, 114, 232
Egg, large Goose.........................93, 135
" Preserving under Ground.................214
" Hatching after Transportation...........210
" to Preserve..............................223
" Hatcher, description of.................228
Elderberry Wine to make.......................184
England, Tour in, No. 17.......................36
" Jottings in..............................78
English Farmer and Farming..................36, 37
Excretions from Roots, none...................251
Exports, Increase in our Agricultural.....260, 329

F.

Farm of Mr. Douglass............................4
" A Mexican.................................49
" of Mr. Morgan............................110
" of Mr. Gibbons...........................130
" of Mr. Woolsey...........................163
" of Messrs. Lathrop.......................194
" of Mr. Lamb..............................195
" of Mr. Clift.............................226
" at Deanston..............................252
" of Mr. Pell..............................258
" General Management of....................308
" Architecture.............................318
Farmers' Club, N. Y., Proceedings of { 6, 41, 71, 100, 197, 233
" " Address of.............................275
Farming, Massachusetts.........................207
" Improved in Massachusetts................248
" in Alabama and Tennessee.................311
" in Wiskonsan.............................157
" in Saratoga..............................365
Fat and Muscle................................372
Fences, Moveable..............................176
" New Jersey...............................180
" Costly...................................341
Film on the Eye, Remedy for...................253
Fish-Ponds, described.........................259
Flax, Culture of..............................129
Flowers, Preserved by Guano...................251
" Magnificent, described...................350
" how Attained in Winter..............371, 373
Flower Seeds, saving..........................315
Fly-Turnep, to destroy (see Insects).
Fountains, Description of.....................133
Fowls, Poland, Characteristics of...............41

Page.
Fowls, Russian, Description of..................241
Fruits, Change of at the West....................9
" Preserving Apples and Pears..........29, 347
" Exportation of..........................106
" Cultivation of..........................116
" Choice Varieties of.....................120
" Peach and Fig Orchard...................182
" Statistics of...........................185
" Best Method of raising Peaches in a Pinery.187
" Syrian, Description of..................187
" at the South............................363

G.

Galvanic Experiments on Potatoes...............233
Gardens, Kitchen, Fruit, and Flower (see Month. Cal.)
Gardener's Assistant, Young.....................94
Gaylord, Willis, Obituary of...................133
Genesee Farmer, New.............................94
Georgia Lands and Agriculture..................117
Grafting Knife, Description of.................144
" Directions for..........................175
Grain, Harrowing................................71
" Cutting..................................193
Grapes, to Preserve............................372
Grass, Grama or Buffalo.........................22
" Dock, Couch, &c., to kill.................20
" Tornillo or Screw........................172
" Gama and Bermuda.........................335
" on Clay Lands............................307
" Tussac, described........................343
" Seeding Lands in Georgia.................344
Grease-Spots, to Remove........................157
Grounds, to be Stirred in Dry Weather..........197
Grove, H. D., Obituary of......................100
Guano, Fossil....................................7
" Experiments with..........................23
" for Turneps...............................29
" Localities and Analysis of................98
" in Ichaboe...............................220
" Mode of Applying.........................222
" Useful in Preserving Flowers.............251
" Test for, Qualities of, and Substitute for..252
" Importation of into England..............283
" History of...............................285
" Description of...........................334
" Instructions for Using...................348

H.

Hams to Pickle.................................350
Hand Flower....................................354
Hay, Cut, Superiority of.......................157
" Time for Cutting..........................195
" Rigging, Description of...................273
" American, in England......................347
Hedges, Buckthorn...............................48
Hemp Seed, Culture of, Exportation of.......16, 257
" Brake, new...............................349
Herd Book, proposed American...................154
Honey-Dew, explained...........................291
Hops, Culture of................................67
Horse, Nutwith, Description and Pedigree of.....28
" English...................................78
" Norman...................................209
" Unsound Feet in, Clipping, Boot for.....78,79
" Farm and other............................84
" Power, cheap.............................354
" Longevity of..............................93
" John Blount..............................126
" Fashion and Mariner......................130
" Improvement in...........................155
" Old......................................156

age.
Horses, Cure for Founder.......................190
" Arabian and Persian, Inquiry for.........321
Horticulture, Profitable........................41
" Mission to China..........................93
" Twine for Wall Trees......................93

I.

Implements, Agricultural, for the South..111, 247, 305
Incubation, Novel..............................252
" Daily Progress Described.................290
Indigo in Louisiana.............................92
Insects (see Diseases of Trees, Vines, Calendars, &c.)
" Pheasants destructive of.................155
" to Destroy on Vines......................156
" " on Gooseberries........................252
" " on Peach Trees.........................157
" " on Rose Leaves.........................170
" " Turnep Fly.............................187
" to Kill...........................93, 187, 197
" Destroyed by Ladybirds...................331
Irrigation, Value of...........................371
Itch, Mad, Cure for............................157

J.

Johnstone's Agricultural Chemistry.............317

L.

Lands, Massachusetts, worn out..................55
" Waste, in Great Britain...................93
" too much.................................235
Lard Oil, quantity made........................318
Lectures proposed among Farmers................329
Lice on Fruit Trees.............................73
" to Destroy on Cattle.....................177
Liebig, Errors in, and Review of............29, 56
Lime (see Manure).
" Benefit of in Destroying Insects..........56
" Prices of in New York................100, 120
Locust Trees, Inquiry..........................345
Losses by the Mississippi Flood................349
Loudon, Mr., Notice of, Obituary Notice of....30, 61

M.

Madder, culture of.............................357
Manure (see Guano, Lime, &c.), Marsh Mud.........6
" Lime..................................7, 34, 71
" Bommer's Patent............................9
" for Melons................................29
" Forest Leaves.............................39
" Muck, Experiments with....................51
" Salt as...............................66, 71
" for Cotton................................77
" Marl......................................70
" for Strawberries..........................93
" for the Greenhouse.......................125
" from Fowls...............................133
" Saline for Potatoes......................139
" Coal Tar.................................155
" Saw Dust.................................155
" Sulphate of Soda, value of...............157
" Cow Pea..................................181
" Special..................................188
" Oil for..................................220
" Waste, Economy of........................222
" Value of Urine...........................233
" " Household Urine........................251
" Bone Dust and Sulphuric Acid.............251
" for General Crops........................258
" Necessity of.............................308
" Soot and Saw Dust........................315
" Cheap....................................318
" from Pigeons.............................333

Page.
Maple Sugar, quantity sold in New York.........317
Markets, Foreign,... 29, 61, 93, 124, 155, 187, 219, 251, 283, 315, 347, 371
" New York. 31, 63, 95, 127, 159, 191, 223, 255, 287, 319, 351, 375
Marl (see Manures), Alabama..................240
" Great Value at the South..................292
Marling, Great Profits of.....................221
Meat, Selection of...........................33
Mechanics in Massachusetts...................304
Mice, to Keep from Winter Sown Peas............93
Mignonette, to Increase the Scent of............372
Milk Pans, Glass.............................187
" Shedding, Soap Suds a remedy for..........221
" Great Profit of..........................286
Millet, Yellow, described......................348
Mulberry Paper.............................237
Mules for Agricultural Purposes.................19
Multicole Rye, Notice of...................30, 71
Mustard Seed for Stock.......................219
" " Profit of Growing..............349

N.

New England Fruit Book......................254
" " Farmer.........................254
New American Orchardist.....................354
New York Agricultural Institute described.......274
Nursery and Garden of Messrs. Downing.........97
" " " Messrs. Winter & Co.....325

O.

Oaks Ancient, Size of..........................29
" English, in America.............33, 119, 172
" Timber, great Durability of..............155
" Grafting with Chestnuts..................327
Oil for Manure...............................220
Onions, Large................................93
" Cultivation by the Tartars..............155
" Great Yield of.........................374
Orchards (see Trees), Management of Young....304
Oregon Territory, Description of...............225
Organic Matter in Water......................29

P.

Paper from Cane.............................157
" " Mulberry.........................237
Pawlovnia Imperialis..........................29
Peas, to keep Mice from winter-sown.............93
" Extraordinary Production of..............372
" Three Thousand Years old................372
" the Georgia Table.......................174
" the Cow, as a Fertilizer..................181
" " Cultivation of...................236
Pell, Robt. L., Experimental Farming...........119
Pennsylvania Farmer, noticed.................125
Peruvian Sheep, Description of.................315
Phosphate of Lime, Mineral...................214
Physicians, Agriculturists..................170, 206
Piggery, Description of.......................177
Pindars, Culture of..........................18
Planters' Banner, noticed.....................30
Planters, Proposed System for Southern..........322
Plaster of Paris, Good Effects of................75
" " Prices of in New York.........100
" " near Salt Water...............119
" " where not beneficial............225
Plow, Three Share, described....................38
" Steam.................................93
" Subsoil and Others.......................100
" American in England....................323
" for turning under the Cow-Pea.............362

Page
Plowing, Subsoil.....................69, 251, 366
" Early on Prairies......................221
" Fall recommended.....................345
Plow Boy, noticed...........................158
Plum Pudding for the Million..................219
Policy of American Farmers.............338, 365
Polotokian, or Chicken-Hatcher..................26
Pork Trade of Cincinnati......................157
" American in England....................219
Postage, Errors in............................330
Potatoes, Disease in............8, 316, 318, 350, 354
" Culture of........................56, 162
" Prolific...........................61, 62
" Saline Manure for.....................139
" Comparative Value of..................371
" Earliest Known.......................371
" Great Yield of........................374
Poulterer's, the American, Companion, noticed.158, 374
Poultry, Twin Chickens described............5, 347
" Useful to Fruit-Trees...................72
" Cochin China Pullets...................93
" Profits of.....................145, 201
" Pheasants destructive to Wire Worms...155
" Dorking Fowls, description of..........164
" Mode of Keeping.....................197
" Winter Keeping.......................210
" Russian Fowls........................241
" Raising Turkeys......................242
" House for described 16, 336
" Guinea Goose described................304
" Prices of Fancy......................328
" Hens, Inquiry as to Habits, &c..........344
" Mexican Pheasants described...........347
" Singular Hen " 348
" Management of.......................356
" Error Corrected......................350
" Yards, Chinese.......................371
" A Great Layer.......................371
Prunes grown in the Southern States............318
Pulveriser, described..........................25
Pumpkins, to preserve........................328
" Great Yield of......................350
Pump, the Lifting and Forcing.................292

Q.

Quarterly Journal of Newfoundland Agriculture...30
Quinces, Large..............................349
Quotations, Credit...........126, 221, 253, 285, 286

R.

Rats, to destroy.............................284
Reaping Machine, Description of................238
" and Threshing Machine...............372
Rein, Patent Safety..........................233
Report on Agriculture from N. Y. Legislature....126
" of Hon. H. L. Ellsworth, Com. of Patents..189
" Ruffins on South Carolina Agriculture....285
Rham, Rev. W. L., Obituary of..................30
Rhinelander, Dr., Garden of...................310
Rhubarb Leaves, Poison......................317
" " Large Stalks of...............252
Rice, large grain............................221
Rooks, Destroyers of Worms...................252
Root Crops, Directions for Harvesting...........257
Roses, to propagate by cutting.................251
" the Prairie...........................371
Rotation for Garden Crops....................155
" " Farm Crops....................258
" of Crops necessary..................360
Ruta Bagas, introduction into England...........30
Rye and Grass Seed sowing among Corn.........232

Page.

Rye, Directions for cultivating...260
“ twenty-seven Crops in Succession...318

S.

Saleratus, Composition of...366
Salt (see Manures), for killing Snails...93
Salting Meat by Patent Process...219
Scotland, Agriculture of...262, 330
Sea Weed, a Preventive of Curculio...286
Seeds for distribution...100
“ Steeping before Sowing...129
“ Saving for Use...289
“ Chemical Solutions for...324
Sheep Country, the Best...50, 179
“ Diseases of...66
“ to make Ewes own a Lamb...66, 124
“ Paular Merinos...91, 102, 141, 215, 264, 269
“ Number of in Great Britain...93
“ Feeding in Sheds...93
“ History of the Merino...136
“ on Driving...138
“ South-Down for the South...157
“ Saxon Merinos in the South...167
“ Long-Wooled, prices and profits of...183
“ Remarkable Fecundity in Ewes...188, 219, 284
“ South-Down for Leicesters...221
“ Poisoned, cure for...221
“ Mr. Clift's long-wooled...227
“ Mr. Grove's Saxon, described...262, 268
“ Death of Grandee (Rambouillet)...299
“ Pedigrees of Pedro and Fortune...300
“ “ Mr. Randall's...377
“ Peruvian, Description of...315
“ South-Down vs. Rambouillet...329
“ Remarks on the old Merino...339
“ Trough, Description of...248
Shell Fruit, how Preserved...372
Shirt Tree of America...220
Silk, Manufacturers of in Great Britain...7
“ Question Settled in its History...30
“ Culture of...55, 101, 272
“ Quantity raised in France...317
Simmonds' Colonial Magazine...317
Snails (see Calendars, &c.), to Kill...93
Soiling Cattle...259
Soils, analysis of...188
“ to be Stirred in Dry Weather...197
“ Sour and Sorrel...340
Soot and Sawdust for Manure...315
Sorrel and Sour Soils...340
Southern Agriculture, &c., Notice of...189
“ Products...212
Spanish Publication on Agriculture...125
Spiders, Red, to destroy...29
Spirit of the Times, noticed...125
Spirits of Turpentine, to destroy Insects...197
Squash, great yield of...350
Stables, Management of...39
Straw-Cutter, description of Botts'...309
Strawberries, manuring...93
“ Varieties of...105
“ Hovey's Seedling...135
“ Large species...315
Subscribers, Ten Thousand...65, 353
Sugar-Cane Cutter, description of...62
“ Improved Cultivation of...156
“ Improvement in Making...355
“ Culture of...165, 204
Sulphate of Soda, value of...157
“ of Ammonia, test of...371
Swallow, a white...348

Page.

Swine, great weight of Berkshire...87, 190
“ Scarcity of and Sheep...79
“ to prevent Injury to in fresh Pea-Fields...156
“ Berkshire, superior Thrift of...175
“ Pigs sucking a Cow...213
“ Great Fecundity of...222

T.

Tanning on the Plantation...109
Tariff on American Products in Germany...155
Teams, Dutch and Yankee...340
Teats, Goose-Oil a Remedy for sore...190
Tennessee Agriculturist, Reply to...329
Threshing Machines, Notice of...125
Times and Prospects...1
Toads, Utility of...251, 349
“ and Frogs, useful to Fruit-Trees...72
Tobacco, Cuba, Cultivation of...62, 182
“ Cultivation of...168, 202, 234, 266
Tools for Boys...39
Transmutation of Grain...315
Trees, Plum, Oil destructive to...9
“ Pear, training...29
“ Peach, Diseases of...43, 72, 182
“ Fruit, Diseases in...80
“ Twine for Fastening Wall...93
“ Produce of an Aged Pear...104
“ Pruning...143
“ Wash for...155
“ Peach, to preserve from Worms...222
“ Cultivation of the Peach...237
“ Transplanting Fruit...285
“ Blight in Pear...321
“ Inquiry respecting Locust...345
“ Grafting the Chestnut on Oak...347
Tussac Grass, described...343

U.

Urine (see Manures), Substances for Absorbing...253
“ Value of...233

V.

Valley Farmer...254
Van Mons, Obituary Notice of...61
Villa, Country...5
“ Illustrated...261
Vinegar, Making...289
Vines, Monster Ones...350
“ New Work on...188
Virginia Lands...8, 104

W.

Warbles, Cure for...219
Wash for Burns and Chilblains...372
Waste in Animals, Food Necessary for...372
Washington's Letters, Fac-Similes of...253
Wasps, Suggestions for Killing...219
Water, Simple Mode of Purifying...222
Weather, Prognostication of...7, 292
Wedgewood, Revised Statutes...254
Weeds, to Kill...29, 225
West, Sketches of the...35, 162, 230, 322
Western Farmer's and Gardener's Almanac...94
Western Cultivator...125
Winter, the Present...7
“ “ Coming...292
Wheat of Taos, description of...47
“ Comparative Value of different kinds...124
“ Great Crops of...157
“ Effects of Folding Sheep on...348
“ a New Variety of Spring...179
“ Culture in China...188

Wheat, Improved White Flint 229
" Directions for Cultivating 260
" 320 Bushels per Acre 347
" Average Product of in England 372
Wire Worm, Pheasants Destructive to 155
Wisconsin, Farming in 157
Wool, Great Sale of 190
Wool, Foreign Demand for 267
" Great Yield of 285
" Exported Abroad 329
" Growing in the United States 331

Y.

Yeast, to make, Domestic 124

INDEX TO CORRESPONDENTS AND ILLUSTRATIONS.

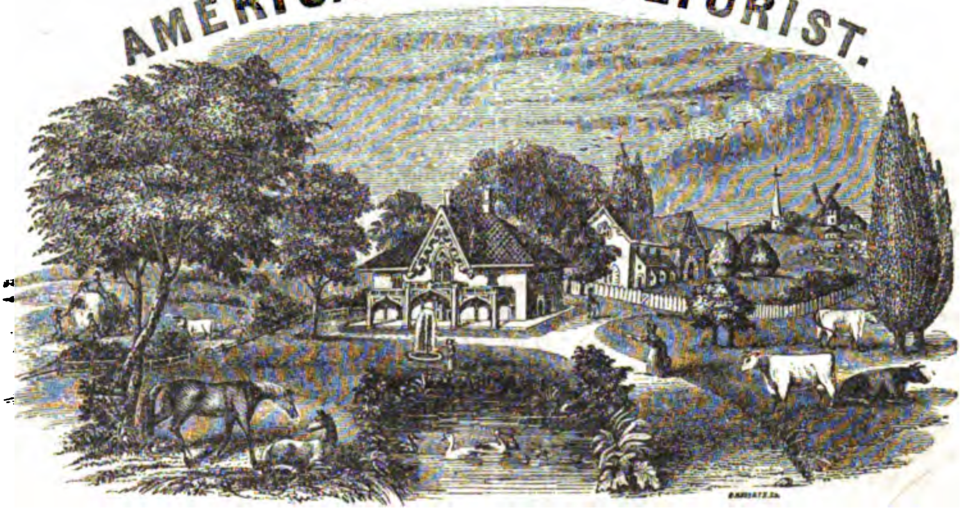
CORRESPONDENTS.

Page.
Affleck, Thomas 181, 197, 247, 305, 340, 362
Allen, L. F 10, 154, 175, 307, 339
Allen, R. L. 19, 52, 84, 139, 140, 176, 214, 331, 344, 360
Americus 136
Andrews, Garnett 117
Andrews, Huldah, & Sons 274
A. R. D. 180
A. S. 42
B. 48, 51, 172
Baker, Cornelius 112
Bateham, M. B. 357
Bates, James 14
Bates, Sullivan 79
Barbour, I. R. 101
Beach, Munson 87
Beatty, Adam 16
Bement, C. N. 201
Betts, Frederick J. 48
Birney, D. B. 45
Boswell, B. G. 54, 106, 116
Botts, T. C. 310
Browne, D. J. 148, 175, 208
Buckeye 340
Canadian Naturalist 331
Casse, C. 235
Carpenter, E. 174
Christian, Samuel F. 167
Chorley, Henry 178
Clift, L. D. 183
C. McD. 51
Coit, T. W. 119
Cockrill, G. L. 25
Cope, Joseph 48, 76
Cooke, S. A. 268
D. B. 174
Emmet, Thomas Addis, ... 114
Examiner 91, 103, 141, 215, 269
Field, Henry A. 210
Galton, Erasmus 145
Gardner, D. P. 168, 202, 235, 240. 266, 274
H. 16, 330, 341
H. C. M. 145, 248
H. D. X. 104
Hendrickson, R. H. 341
Hodge, Benjamin 104
Higginson, S. C. 185
Hunt, J. F. 179
J. S. S. 167
Jewett, Solomon W. 138
Johnson, Jeremiah 275
Kennedy, J. C. G. 179, 213
Knevils, John W. 198
Lee, D. 211
Lewis, John 312
Lyman, J. H. 22, 47, 172, 241
M'Caughan, John J. 18, 50
M'Cormick, C. H. 238
M'Donald, A. 179, 311
M'Williams, George S. 238
Meigs, Henry, ... 110, 119
Mrs. S. 184
Nelson, John 112
Northern Farmer, ... 212
Norwood, Wm. A. 120
Norton, John P. 262, 330
Octogenarian 308
Orange Co. Lady 84
O'Reilly, Henry 345
Parsons, S. B. 14, 310
Partridge, Wm. 134, 171, 200, 243, 340, 366
Pell, Robert L. 56, 108
Peters, T. C. 76, 177
Philips, M. W. 77, 236, 337, 363
Phillips, Philetus 135
Page.
Prince, Wm. R. 119
Putnam, ... 206, 249, 304, 341
Q. 344
R. 338, 365
Randall, Henry S. 264, 367
Raymond, Charles H. 323
Roome Charles 248
S. 135
S. S. 43, 72
S. W. 79
Smith, F. N. 343
Sotham, W. H. 46
Sharwood, Dendy, ... 107, 365
Spaulding, Thomas 165, 204, 244, 335, 366
Starr, Jr., Charles 242, 273
Stebbins, D. 55, 237, 272
Stevens, Dr. 170
Subscriber 345
T. 305
T. R. R. 105
Teschemacher, J. E. 23, 25, 334
Thomas, J. 55
Tomlinson, Charles H. 210
Traveller 55, 75, 110, 207, 248, 304
Valk, J. M. C. 184
Van Buren, M. 170
W. D. 301
W. H. S. 344
Westchester County 144
Williams, Robert W. 265
Winfree, Philip 109

ILLUSTRATIONS.

Aviaries or Poultry Houses 16, 336
Borers 75
Budding 208
Cotton Gin 337
Corn Sheller 343
Curculio 80, 81, 82
Diligence, a Norman Horse 209
Downing's Nursery, View from 98
Draining, Plan of 112
" Implements 113
Fence, a Moveable 176
Fountain 133
Fowls, Russia 241
Grafting 175, 176
" Knife 144
Goose, the Guinea or African 304
Hand Flower 354
Hay Rigging 273
Horse Hoe and Drill Harrow, Wilkie's 112
Horse Power 355
Hedge of Buckthorn 48
Meteor, a Durham Bull 364
Method of Taming a Savage Bull 145
Mexican Farm and Volcanoes 49
Nutwith, a Race Horse 28
Piggery 177
" in Kentucky 162
Plow, Three Share, ... 28
" Bull Tongue 305
Pruning 144
Pump, a Lifting and Forcing 292
Reaping Machine 239, 240
Safety Rein, the Patent 232
Sheltie, a half Ayrshire and Durham Bull 230
Showground at Poughkeepsie, Plan of 293
Silkworm Feeding Cradle 272
Strawberry, Hovey's Seedling 135
Straw-Cutter, Botts' 309
Taymouth Castle 261
Villa, a Country 5

THE
AMERICAN AGRICULTURIST.



Agriculture is the most healthful, the most useful, and the most
noble employment of Man.—*Washington.*

VOL. III. NEW YORK, JANUARY, 1844. NO. I.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

THE TIMES.

In presenting the First Number of the Third Volume of the American Agriculturist to our readers, we can not but congratulate them on the change of times which has taken place within one short year, and look back with some degree of satisfaction to an article in our last January number, anticipating in a measure all that has come to pass. If the products of the farm are still thought to be too low, everything else is in proportion—not even excepting money, which can not be loaned at this present moment by capitalists, at a higher rate of interest per annum in Wall street, than it would have commanded per month six or seven years ago, when wheat, corn, pork, &c., were more than double the price they now are. But we contend that agricultural products, taking everything into consideration, are now bringing fair prices; and we think that our farmers generally have no reason to complain. There is no doubt in our mind, however, that they will gradually advance, and upon the opening of spring, and next summer, rule higher than they now do. There are many reasons why this should be so, the principal of which are, that the crops of hay, potatoes, and other roots, corn, sugar, and especially of cotton, have not been equal this year to those of the past. A general revival of business has also taken place; and a portion of our population which had returned to farming, have again resumed their mechanical and manufacturing employments. Owing to the great abundance of money, new enterprises are likely to be undertaken on private account; our general government will undoubtedly commence a fresh system of internal improvements—more especially such as regards facilitating the navigation of the western rivers, and improving the harbors on the lakes; the western states will also be enabled to go on with their most promising railroads and canals; and then if we look abroad at the states in Europe, we see a general revival of business there, and the prospect, in addition, of the duties on Flour and Meal being still further reduced in Great Britain, so much so, as to considerably increase the amount of our exportation of these articles. We could state other causes that are at work which are likely to slightly raise the price of provisions, but deem it unnecessary to dwell upon them. We think it disgraceful any longer now to speak of hard times; for, to the great majority of our citizens, they were never really substantially better. Let every one, then, be industrious and frugal—keep out of debt—look forward to the future with renewed hope—trust in Providence, and be assured that the country has again entered upon a bright and prosperous career.

A FARMER'S EDUCATION.

We can not think that the present system of educating the rural population of the country is what it to ought be. There are many things which might be taught in our district schools, which, so far as our information extends, seem never to have been thought of; things which may not only be made extremely interesting and instructive to children, but at the same time prove of great individual benefit when grown up, and they come to act for themselves; and such also as would add largely to the wealth, strength, and resources of the country. Here is one item, for example—apples. We find one person in this vicinity growing and shipping these to England, and realising $9 per barrel; another selling them in this market from $4 to $5 per barrel; while apples of an inferior kind are not worth over $1 to $2, and many are so poor that they could scarcely be given away.

Now a child knows good and poor fruit by its taste; but there are other points about it to which it is important to direct attention. Suppose, then, any person residing in the school-district who may have paid some little attention to this subject, should take a few dozen apples, pears, or any other fruits of the season of various kinds, good, bad, and indifferent, and make his way with them to the school-house, call up the children around him, and point out their relative value, and the true reason why one should be cultivated in preference to the other. He would explain that a good apple should be of a suitable size; regular, even shape; with a small stem; smooth, thin skin; rich, juicy, solid pulp; pleasant flavor, either tart or sweet; a small core, and few seeds. In short, that it should possess as much pleasant nutritious substance as possible, combined with the least amount of stem, skin, core, and seed. Now this, if a good bearer, would be a superior apple—worthy of a name, and of propagation. Then, by way of contrast, the children should be shown a poor apple, and their attention be called to that—not only by allowing them to judge of the difference in taste, but also by pointing out the long, large stem; the thick, coarse skin; the dry, tough, sour pulp; the large core, and the small amount of really nutritious substance in the fruit. After this they might be taught to graft, and be instructed upon fruit-trees in general, and the best system of their management. Boys from 12 to 15 years old may learn all this as easily as grown men, and when they come to be grown up and manage their own farms, the great majority of them would not only have plenty of fruit around them, but that also of a first-rate quality, although they might expect no foreign market for it. If good fruit were universally cultivated throughout the country, this alone would be adding to its annual wealth several millions of dollars. In the same simple manner, the children of every rural district could be taught to judge of the relative difference in the value of vegetables; that a dry, mealy potato is not only more agreeable to their own taste, but twice, or perhaps thrice as nutritious for their stock-feeding as a poor-flavored, watery one may be. How few, if asked, can tell the difference in the value to animals of sugar-beet and mangel-wurzel, or the succulent ruta-baga and the coarse, pithy, white turnep. There is as great a difference in the nutriment of various kinds of winter-squash and pumpkins; and yet scarce any one thinks or speaks of it. The same in the grasses; in wheat, rye, barley, oats, and corn; in cotton, and, we are not sure, in rice and sugar; the different breeds of horses, cattle, sheep, swine, and poultry; the plow, and, indeed, all agricultural implements. These may be called very homely subjects to be taught a child; but are they not of vast consequence in the aggregate to the man and to the country? We believe that persons may be found in nearly all our school districts, who would be quite capable of lecturing intelligently on the subjects herein mentioned, and willing to do it gratuitously; and if one hour a day for three months in the year could be given to these, the farmers of our country would greatly increase their stores of knowledge in a few years, understand the reasons of their practice better than they now do, and be working to much more profit and advantage.

When the young men had attained a mature age, they might form themselves into classes, and devote their winter evenings to obtain a knowledge of manures, soils, and the best method of improving them; and the best system of a rotation of crops. To this might be added an acquaintance with the elementary principles of chemistry, geology, botany, and mechanics. It really seems to us, that all the subjects of education which we have here mentioned, are easily attainable by every person before arriving at 21 years of age, however humble his circumstances, and without detriment to the course of studies already pursued at the district schools.

Books for reading, in the country schools especially, ought to be different from what they now are generally. They should contain more upon the subjects of agriculture, horticulture, stock-breeding, and mechanics; and less of mere literary matter. Poets, orators, and fine writers, are not as much wanted as good farmers and mechanics. We have a burning desire to see every child in the republic, male and female, educated in such a manner as to be able to make the most of the resources of nature which surround them. A thorough education in the theory and practice of agriculture, the great business of our country, and, indeed, of mankind, is what our children should be taught. As the products of agriculture may be improved and cheapened, so will it follow with everything else—manufactures, arts, literature, and time, also, to avail ourselves of their pleasures and advantages.

CULTIVATION OF CLEARED LANDS.

After the burning is accomplished, and the land is ready for a crop, the first thing necessary to be done, if the ashes are not to be disposed of for making potash, is to take shovels and distribute them and the coals which are left by the brush and log-heaps, as widely as possible around; otherwise, those spots will remain too rich, and give the crop there a rank and uneven growth for years. This accomplished, and the land enclosed under a good fence, it is ready for tillage.

First Crops.—To one unacquainted with new lands, it seems to him, after the removal of the wood, not a little astonishing to witness the numerous rank weeds which instantly spring up, where before scarce one was to be seen; and we know of nothing which so strongly reminds us of the primeval curse, "thorns also and thistles shall it bring forth to thee," as a newly-cleared forest-field. The thrifty fire-weed shoots out like thick-sown wheat; the thistle pushes up its head; and cockles, and briars, and burrs, come forth like the fabled dragon's teeth. In order to displace these and check their growth, it becomes very important to get in such a crop as will cover the land as thickly as possible. But such, frequently, are the pressing wants of the new settler, that this can not always be accomplished; he must consequently, take things as they are with him, and do as well as possible under the circumstances of the case. His first crops, therefore, will depend mainly upon three things: 1. The nature of the soil. 2. The climate. 3. The more immediate wants of the occupant.

It must be recollected that forest-lands recently cleared, are so full of large roots of the trees just cut off, and these run so near the surface of the ground, that they make it almost impossible to plow. When the soil, however, is suitable for a good growth of corn or wheat, these crops pay so well, and are so necessary to the family of the settler, that plowing is often immediately attempted. The best instrument for this purpose, is a strong and rather narrow plow skimming the earth lightly, and armed with a strong-set, sharp cutter forward, which, as it moves along, easily severs the smaller roots, while the larger ones are adroitly avoided by the plowman. After plowing, the land is thoroughly harrowed, then all the broken roots are raked up into heaps and carted away, or are suffered to remain till sufficiently dry, and then burnt. Others do not attempt to plow at all, but after harrowing the land as well as the stumps and top-roots will permit, sow wheat broad-cast, and then harrow and brush it in. If it be a good soil for wheat, and reasonably friable, and a favorable season ensues, it takes well, smothers the weeds, and yields a fair crop even with this imperfect preparation.

When plowing is not resorted to for corn, it is planted in hills at suitable distances by walking straight forward with the hoe, removing a shallow scoop of soil, dropping the seed in, and then covering it. Some give the corn no after-culture for the first, second, and occasionally even the third year, from carelessness, laziness, or in consequence of the numerous strong roots, which, till somewhat decayed, are so great an obstruction to the plow. But this allows the weeds to spring up in great abundance, frequently almost choking the crop, and under any circumstances greatly lessening the yield. We have occasionally seen a heavy, narrow harrow, with strong, sharp teeth thickly set, made for the purpose of cutting down the weeds, to be followed with hoes. The harrow, from the nature of circumstances, is partial in its effects, and hoeing is so slow and laborious, that few settlers have patience to trouble themselves about the weeds, and they allow the corn to take its chance, and do its own battling against them, and yield what it can.

When clearing lands and putting them into cultivation, we fortunately were not much in want of wheat or corn; we more generally, therefore, put them immediately into grass, allowing them to remain so for several years, till the roots of the trees were sufficiently rotted to allow plowing with facility. Our method in effecting this, was to burn off as early as possible, harrow well, and always sow oats with the grass-seed, no matter if as late as July or August, as the oats kept the weeds down, and if they did not ripen or get a sufficient growth to be mowed for fodder, they would at least make a good covering for the grass. We think it very important to put on an extra quantity of grass seed in first seeding new lands, as the leaves of the forest-trees on the ground, chips, roots, &c., prevent more or less of it taking. No chance should be left for the weeds to come in, as it is more difficult eradicating them at this time, after once getting their growth, than at any other.

The first cultivation of the prairies is entirely different from that of woodland; but as this subject was pretty fully discussed by Mr. Murray, and Mr. Robinson in our first volume, we shall not enter upon it, trusting that Mr. Robinson, agreeably to what he then led us to hope, will now finish up what he intended to say on these interesting matters.

Upon the management of the forest-lands at the south, we do not feel qualified to enter; and trust, therefore, some of our friends in that quarter will do it for us. We believe, however, that corn, cotton, rice, and even sugar-cane, are usually their first crops—we at least have often seen these crops growing on very new land in the southern states.

Manure.—When the soil has not already a sufficient quantity in it, the best manure for new lands is lime, as this tends to hasten the decomposition of the coarse vegetable matter with which it is surcharged, faster than anything else which can usually be applied at a like cost. When clover is sown, a top-dressing with plaster is very beneficial.

FARM OF GEORGE DOUGLASS, Esq.

We had so much to say in our last Volume of the agriculture of Long Island, that we do not know but our readers may think us somewhat partial to it. In describing Mr. Douglass' farm, therefore, we shall merely mention such things as we found different from others which we visited.

This excellent farm is beautifully situated on the east side of Little Neck bay. The mansion and outbuildings are elegant and commodious; the view around is picturesque and varied in a high degree, and the grounds are laid out with much taste, and handsomely planted with trees and a profusion of choice shrubbery. The garden is a very fine one indeed, and rich in vegetables, and fruits, and flowers. The fields are of convenient size and well fenced, principally wtih stone wall. A good stock is kept here, mostly of milch cows of a high Durham cross, all of which prove uncommonly good milkers. From these, and the horses and oxen necessary for the farm work, a good deal of manure is made. In addition to this, the farm being bounded by the salt water, large quantities of sea-mud are thrown on the beach, which is gathered up and made to add to the riches of the dung-heap; so that Mr. Douglass has the means of enriching his land to any reasonable extent, and can, therefore, crop it more severely than if it were differently situated.

Rotation.—The farm is under the management of Mr. Johnson, who politely took us over it and showed us everything which he thought might deserve attention. He puts his land hard at work, and the following is the rotation. First year, after mowing, break up the meadows and sow buckwheat. Second year, spread the manure broadcast in the spring, and plant with corn or roots. Third year, sow oats or barley, and at the proper time, after harvesting, put in wheat with grass-seed. The fourth year the wheat is harvested; the land then remains in grass for six years. Under this system the soil has been steadily increasing in fertility, and the crops good. We are not sure, with such abundant resources of manure at at hand, that this rotation may not be the best, although the different kinds of grain following each other so rapidly, would, under ordinary circumstances, be considered very exhausting.

Preventive against the Turnep-Fly.—Mr. Johnson informed us, by mixing one pound of snuff, two pounds of sulphur, and two bushels of ashes together, and sowing this mixture broadcast upon the turneps as soon as they appear above ground, it would completely prevent the ravages of the fly. If soot can be had, it is also an excellent ingredient to add to the mixture.

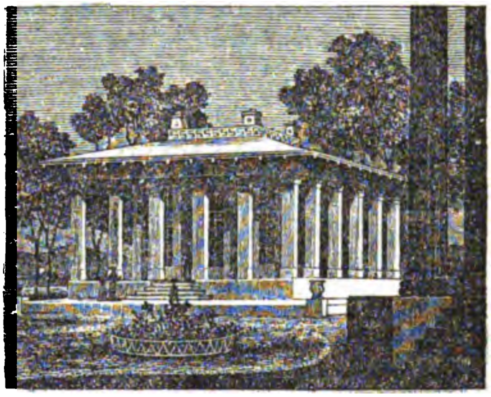
Among other little items, we saw here a very fine Scotch cattle-dog. He is of medium size, with long, silky hair, and possesses a very intelligent countenance. He suffers somewhat from the heat of our climate; yet, nevertheless, does his work up in excellent style. Mr. Johnson has succeeded, he thinks, in acclimating the Scotch holly, so far that it stood out the severity of last winter without protection, and flourished well the past summer. We should think this a pretty severe test; and we shall rejoice if this beautiful shrub, with its silver-edged, deep-green foliage, can be successfully introduced among us. Mr. Johnson showed us several large trees that he had transplanted, which we found doing very well. He adopted the plan recommended by Sir Henry Steuart, and notwithstanding the great difference of climate between this and Scotland, where Sir Henry wrote, by taking up a large ball of earth with them, he has succeeded thus far better than could have been anticipated. Mr. Johnson would show his apparatus for transplanting with pleasure, and give any details required by those who are desirous of making the experiment of transplanting.

TWIN CHICKENS.

We recollect in our early days, when to possess a fine flock of poultry was the summit of our worldly ambition, of being told that eggs with double yolks would produce twin chickens. But among the numerous eggs that we continued to set from year to year of this kind, we never obtained any produce, nor were our acquaintances more lucky than ourselves; we therefore concluded that it was an "old woman's notion," hatching twin chickens from double-yolk eggs, and gave the matter up in despair, thinking, at least, that our birds were not destined to increase by this two-fold process. That eggs with double yolks will produce twin chickens there is now no longer a doubt in our minds; for in a recent visit to the Casina, the beautiful residence at Hurl-Gate Neck, of G. M. Woolsey, Esq., we saw one of such a pair. It was produced by the care of his factotum of the aviary, a stout, hearty Scotchwoman. Of this there can be no dispute; for, observing that one large egg under one of her setting hens had not hatched the day after all the other chickens came out, she carefully broke the end of the shell and picked it open, when out popped two strong live chickens, which she had not the slightest difficulty in raising. One proved a cock, the other a pullet. The latter we saw, and a fine little bird it is. The cock had been sold to go to market a few days before we visited the Casina; but in describing it, the good woman said: "It was, indeed, a very pratty beast." Now hatching twin chickens may be very common with some, and they may be inclined to smile over the simple tale we have so circumstantially told; but the real fact occurring beyond dispute, being new to us, we have thought it worthy a grave record in our journal. We are of opinion now that double-yolk eggs will produce twin chickens, perhaps as surely as single eggs, and the reason that they do not oftener, is, probably, because the shell is so thick that the chicken can not break it and escape. The person above, gave it as her opinion that her twin chickens could never have broken through the egg-shell, it was so much stronger and thicker than those of single yolks.

Pigs Brought up without Sucking.—The same good woman showed us a fine litter of seven Berkshire pigs, which she brought up without sucking; their dam having died almost instantly after giving birth to them. We doubt whether any other pigs than Berkshires would have had the sense to live and do well under such adverse circumstances.

COUNTRY VILLA.—(Fig. 1.)



Above we present our readers with the view of a country villa, the architecture of which, though rather ambitious, has been much admired, and is somewhat in vogue in this vicinity. We think the style better adapted for the south than the north. There, Venetian blinds, to open and shut at pleasure, would be inserted between the pillars, which would make the piazza a cool place to sit in, and extremely pleasant. The same idea may be adopted at the north in summer, and glass with three feet or so of panels at the bottom, could be substituted for them in winter, transforming the piazza thus into a beautiful conservatory during this dreary season of the year.

SHELTER FOR STOCK.

It has afforded us much satisfaction in various excursions which we have made through the country for the past few years, to observe the greatly increased attention that is paid by the farmers to the comfortable shelter of their stock. Many is the barn, with its accompanying stables, and sheds, and yards, we have found—admirable examples of their kind, and approaching as near to perfection as it is possible perhaps to attain. If these could be more extensively copied it would leave little to desire; but unfortunately, the principles of comfortable, economical shelter are little studied, and much less practised than they should be.

Many think when they have built their barn, and are able to tie up their stock at night, that everything is accomplished; whereas, they have only advanced in the first step. To be sure this is the most important one; yet we hold, in addition to the shelter of the stables at night, open sheds joining on to and running out from the barn, making at least three sides of a square, and enclosing commodious yards, are nearly as necessary for sunning and exercise by day, especially for the younger part of the stock. These may be made very cheap, with board roofs and sides; and if sawed stuff is difficult to be obtained, with logs rolled up for the sides, and well chinked and plastered with clay, and poles over-laid with coarse hay or straw for a roof. Where timber is scarce, a stone wall, or an earth embankment may be thrown up six or seven feet high, or a double row of rails or light poles can be laid up three feet apart or so, and then filled in with coarse hay or straw for the wall shelter. The only objection to this is, that however poor the hay or straw, the stock, frequently from mere wantonness, will pull it out and devour it; but after remaining one year, it becomes musty and foul, and they are not apt to do so.

Another great consideration in making sheds and yards, and having them well supplied with litter, is, that by keeping stock confined in them, all the manure, both solid and liquid, is saved; and in addition to their extra comfort, animals eat less and thrive better than when unprotected and suffered to roam at large. Water for drink, of as warm a temperature as can be obtained from a spring or well, ought to be bountifully supplied in the yard, and in such a manner as not to overflow and wet the ground or litter around.

MARSH-MUD.

By the application of marsh-mud mixed with marl, on quite ordinary land, Mr. Carmichael, of Queen Anne's county, Maryland, obtained the past year 1,026 bushels of wheat, weighing 60 lbs. to the bushel, upon 20 acres of land, being nearly 51½ bushels to the acre. What the quality of his marl was, mixed with the mud, we are unable to say; though, we presume, it was like much of that of the highest fertilizing qualities which is found in Monmouth county, New Jersey. and is supposed to be the upheavings of the deposites of the ocean, or in other words, sea and marsh-mud. No better evidence of the great value of marsh-mud could be given than is shown in the production of this great crop of wheat; and we earnestly call attention to it again, being well satisfied that the value of marine deposites has hitherto been too generally overlooked; and that thousands of dollars have been paid out for city manure, by farmers near the seashore, which could have been saved had they understood the value of the highly fertilizing qualities of marsh and sea-mud.

NEW YORK FARMERS' CLUB.

It has been decided that these meetings shall take place hereafter on the *first* and *third* Tuesdays of each month, at 12 o'clock at noon, to continue till 3 o'clock, P. M., at the Reading-Room of the Repository of the American Institute in the Park. The place is central and commodious, and these hours are, upon the whole, considered the most convenient for the attendance of the members residing in the country. There is no ceremony of admission, nor charge whatever. Every one is free to come and go when he pleases. The Club-meetings are becoming of more interest and importance every month; and it is especially desired that all who feel an interest in the advancement of agriculture, whether they reside in the city or in the country, will attend, and furnish their quota of information.

At the meeting on Tuesday, the 5th of December, Mr. Schuyler was called to the chair.

Mr. Meigs offered a report, recommending Bommer's method of making manure.

Mr. Wakeman presented a report, containing a Constitution and By-Laws for the Club, which was adopted.

Mr. Carter, from the Committee on Grafts, reported that they recommend a suitable place be provided in this city for the deposite and preservation of grafts and buds, and that a suitable person be appointed to take charge of and to manage the concern; that one fourth of the grafts be given to the first applicants, and the remainder be sold to pay expenses; that persons sending grafts send also descriptions of the fruit, and that likenesses of the fruit be taken in wax for preservation. The commitee also recommend that a good farm be procured in or near the city, where agriculture and horticulture might be carried on to the best possible advantage, and that the poor be employed on the farm without expense to the city, provided the corporation will give the land.

Dr. Gardner's programme of Agricultural Lectures was read and strongly recommended by General Tallmadge. It was ordered that the Club recommend the lectures to the public, and that the subject of allowing the use of the Hall of the Repository for the lectures be referred to a committee.

Commodore De Kay offered grafts from trees which bore the premium pears at the last Fair.

Mr. Sewell presented some cuttings of grape-vines.

It was then ordered that the articles presented be mentioned, with the names of the donors, in a record of thanks to be kept by the Club.

A communication on marl-manures and salt, from F. Mortimer Butler, was read. Mr. Stevens said that on Long Island salt as a manure was inefficient—attributable to the presence of sea-air. Colonel Clark remarked on the chemical influence of salt and lime.

Mr. Boswell presented several kinds of apples, nearly all the growth of western New York. He then gave a few particulars on the cultivation of the cranberry and other fruits, which, as he has obligingly offered to furnish us more at length hereafter, we omit what was said at the Club.

Dr. Gardner, General Tallmadge, and Mr. Stevens, entered into some discussion on the use of lime, the gist of which was, that when the ashes of vegetables and plants show lime in their analyses, it is good manure for them; that it is particularly valuable in destroying insects where used; and that it proves much more beneficial on clay than sandy soils. Dr. Gardner then spoke of the value of certain kinds of marl, especially for wheat-crops, when it contained a large proportion of potass. As one instance of its value, he stated that a gentleman in New Jersey not long since purchased a farm there for a trifling sum, and by using marl on it has now made it worth $100 an acre. He also discussed, with Mr. Stevens, the value of ashes—the latter stating that the farmers on Long Island found very little difference between the effects of those leached and unleached.

Dr. Field made a report from the Committee on the Long Island Farms, which was read, accepted, and referred to the same committee, to prepare a memorial to the corporation of the city on that subject, viz., employment of the children, &c., in horticulture, agriculture, and growing and manufacturing of silk, &c., in connexion with their education.

General Tallmadge read from the Burlington Silk Record Family Magazine a statement that Great Britain, without producing one pound of the raw material, imports the silk and manufactures it to the amount of $76,000,000 per annum, and employs in this business more than 400,000 operatives—and pays to the silk-weavers alone little short of $14,000,000 per annum.

A letter from Dr. Stebbins, of Northampton, on Pongee silk, was read and referred to a committee on silk from mulberry-bark.

Mr. Baker, of Rahway, N. J., exhibited a map of his farm, and stated that on the drained land he obtained, without any manure, 32 bushels of wheat per acre, and the heaviest crop of grass. He drained twenty acres. Mr. Baker exhibited his draining-tools, and explained their use. They are simple, and well adapted to their purpose.

Mr. Wakeman then moved that six subjects be proposed for discussion, from which the Club shall select for the next meeting.

The second monthly meeting of the Farmers' Club took place on Tuesday, December 19. Forty members were present. Colonel E. Clark was called to the chair.

A letter from J. Torman, Esq., of Cecilton, Md., to the president of the Club, was read. Mr. Torman is eighty-six years of age, and expresses a high degree of interest in agricultural improvement.

A letter from James De Peyster, Esq., was read. He states that he has raised the Egyptian corn for eight years past; it gives 80 to 100 bushels per acre—makes as good cakes as Indian meal or buckwheat, and is as good for poultry and cattle; culture of it strongly recommended by Mr. De Peyster.

A general conversation now took place on birds and their usefulness in destroying insects—insects in general—the disease of the potato—blight of the barberry-bush, &c., &c., which we regret to say we have not space to report at full length.

Mr. Chapman exhibited some Dorking fowls recently imported by him from England.

Guano Manure.—Commodore De Kay stated that he had seen mounds of it on the Florida islands. Colonel Clark thought that the islands on our eastern coast should be examined for it. Dr. Gardner said that fossil guano existed in three localities in the state of New York.

Reports were made by Commodore De Kay on timber, Dr. Gardner on the communication of Mr. Butler, on the influence of sea-water on marshes containing shells, &c.

The Club then adjourned, to meet on Tuesday, the 2d of January.

THE PRESENT WINTER.

We observe that our respected cotemporary, the Prairie Farmer, prophesies the present winter will be more severe than the past was, therein differing from the opinion expressed by us page 267 of our last volume. The forepart of December, 1843, was not near as cold and snowy as the same month for 1842, while the latter part has been the complete antipodes in this latitude of that of last year; being warm, sunny, foggy, and rainy, with a snow-shower or two which melted nearly as fast as it fell; indeed, the month has been of more than average mildness; we are, therefore, correct in our prognostication for at least one third of the time. Our opinions are based upon what we think philosophical principles, although we can not be certain that we are right till we have more experience and observation. These principles will be found explained page, 177 of Vol. I. In return, we should be obliged if the Prairie Farmer would state its reasons why it thinks the present winter will be colder than the last. The weather is an important matter to the farmer, and it would be a great desideratum if it could be foretold a few months in advance, if only in its general aspect. The barometer we have found a very uncertain guide, either upon land or at sea; and besides, its forewarnings are given only a few hours previous to the actual state of things, thus making the possession of it of little benefit to the farmer. We have no doubt that the weather is directed in advance by fixed laws, and that these will yet be discovered by man. The sacred writings occasionally allude to this subject.

DISEASE IN POTATOES.

We hear many complaints in various parts of the country, of a disease in potatoes, which causes them to rot with great rapidity, and throw off a very disagreeable smell. All those with whom we have conversed on the subject, attribute this disease to the excessively hot, dry weather of June and July, followed by long protracted rains, which set in the first part of August, continuing the remainder of the summer and during the fall; thus checking the root in the first instance, and then giving it a watery, forced growth, so long and late, as to prevent the potato properly ripening. In this diseased state they have been found very injurious fed to stock; occasionally, even causing death. No better remedy is yet found to prevent the spread of the rot among potatoes, than spreading them out on a dry floor in a warm building, so thin as not to touch. But when the disease has broken out in a heap of potatoes, even this precaution to save them often proves abortive, and will scarcely pay for the trouble of doing it.

ANNUAL MEETING OF THE N. Y. STATE AG. SOC.

The annual meeting of the New York State Agricultural Society, will be held at the Society's room in the Old State Hall, Albany, on the third Wednesday, (the 17th,) of January, 1844, at 10 o'clock, A. M.

Persons intending to compete for the Society's premiums on field-crops, essays, &c., are reminded that their statements and essays must be sent to the Recording Secretary, Albany, before the first of January.

Presidents of County Agricultural Societies are also requested to transmit the reports required by the statute, to the Recording Secretary, previous to the annual meeting.

Luther Tucker, Rec. Sec'y.

We hope to see a full attendance at the above meeting, for, in addition to the annual doings of the Society, several interesting and important proceedings are anticipated. Among these, we understand a memorial is to be got up, praying the legislature to extend the $8,000 now annually given to Agricultural Societies for five years, to an indefinite length of time. We wish the amount might be increased to $15,000 annually. It would be scarcely over half a cent for each inhabitant in the state, and is a boon small enough to ask for the benefit of the most important interest of the country.

The geological survey of the state being finished, we think we ought now to have an Agricultural survey; and this should be conducted by men who unite the theory and science with the practical part of agriculture and stock-breeding.

The founding of an Agricultural College or High School should not be lost sight of in the proceedings of the society; and we think it important that a memorial be drawn up and presented to the legislature, asking aid for the same.

Some of the arrangements for the next annual show ought to be altered, especially those of classing animals of distinct breeds together. Let them be exhibited hereafter among themselves. We respectfully suggest also to the society, to appoint a publication committee, whose duty it shall be to revise its transactions and those of the county societies, and cut off the verbiage which it is only a waste of ink and paper to print and bind up in its volumes. Most of the engravings in the last volume were disgraceful to the art, and absolute caricatures of the fine animals attempted to be delineated. We hope we shall see no more such.

The Breeders' Convention have another meeting, at the same time with the State Society, and if they conclude to give a scale of points for the future guide of the American breeder, they should weigh well their proceedings, as a single erroneous move will have a most pernicious effect in the country.

Quantity of Butter made from Milk.—We find that cows vary from one tenth to one thirtieth in the quantity of butter produced from their milk; that is, every 100 lbs. of the milk of one cow, will yield 10 lbs. of butter, while others will only give 3½ lbs. of butter from the same quantity.

Scalded Milk for Butter.—In the Boston Plowman, we notice that Mr. Johnson of Framingham, scalds his milk during the winter season after drawing it from the cow, and then sets it away in the usual manner. The butter made from the cream is as yellow, sweet, and solid, as if made in June. The same thing is done by all good butter-makers in this vicinity, with the same effects as detailed by Mr. Johnson.

Virginia Lands.—Considerable interest having been excited among our northern people regarding the eligibility of these lands for emigration, we shall feel much indebted by any communications on their localities—present condition—means of improvement within reach, such as marl, lime, peat, and muck, for renovating them—price—climate, &c., &c. We regret to say that our correspondent G. A. C., in our last volume, has been so occupied with settlement, that he has not had time yet to forward his promised communication. But there must be gentlemen enough at leisure, in the good Old Dominion, who will gladly furnish us information on these interesting topics. We are quite confident that parts of Maryland, Virginia, and the upper country of the Carolinas, offer as great inducements for settlement to our northern people, as any sections of the United States; good lands there, with more or less improvements, may be had from $5 to $10 per acre, and farms with buildings, from $15 to $30. Some lands may be bought as low as $2 per acre. The climate is so mild, that stock need be foddered only two to three months out of the year. General Washington, in a letter we believe to Mr. Sinclair, asserted that sheep, even no farther south than Mount Vernon, would usually pick up a good living from their pastures all the year round.

OIL DESTRUCTIVE TO PLUM-TREES.—Mr. David Tomlinson of Schenectady, informs us, that two of his neighbors lost quite a number of valuable plum-trees the past year, by applying oil to caterpillars in the spring, to destroy them, as they had seen recommended in some publication.

BOMMER'S PATENT METHOD OF MAKING MANURE.—We are repeatedly asked about the above method of making manure, and whether the patent is worth purchasing. We have the best authority for saying, that the only patent granted, is to Messrs. Baer & Gouliaet of Baltimore, the improvement claimed in which is this:—

"What we claim as our improvement on Jauffret's method of forming manure, by the rapid fermentation of vegetable fibres, is, first the forming of the said vegetable matter into piles or heaps, without its being *first immersed* in the prepared lye, and the subsequently saturating the same by the *pouring* on the lye in the manner set forth.

CHARLES BAER,
JOHN GOULIAET."

The *lye*, the main thing above, is *not patented*. Mr. Bommer's "patent" is simply this, and no more, viz: he has purchased of Messrs. Baer & Gouliaet the right for some of the states, of making manure-heaps as set forth in their patent above. The public believe Mr. Bommer has a patent, and they dare not use the ingredients without paying the sum demanded for the invention. Whether this is worth ten dollars, every one now must judge for himself. As for Mr. Bommer's "*new* process," as he terms it, of making manure, the general principles of it have long been practised in France, and pretty much all that is valuable in it will be found in an extract from the Farmers' Mine, by Mr. Heermance, under the head of "New method of making Manure," page 164 of our last volume. Mr. Bommer's method is undoubtedly a good one, and if he gave it in a book at a reasonable price, it would be worthy of purchase. By paying 75 cents for the Farmers' Mine, the public will get about as much useful knowledge as they can obtain from the *patent* of Mr. Bommer for $10. We should not have taken any notice of this subject, except to answer frequent inquiries, and did we not perceive how much public attention has been drawn to this *patent right*, by the communications of Mr. Bommer, which have recently appeared in several of our agricultural papers.

CHANGE OF THE QUALITY OF FRUITS AT THE WEST.—Our excellent friend John Fitz, in the Prairie Farmer, informs us that several kinds of fruits which are considered first rate here, become worthless on being transplanted to the west. This we know to be a fact from our own taste and observation in those parts which we have visited. He recommends growing naturals there, and selecting from the choicest varieties when the fruit appears. This is a capital idea, and if carried into effect, Illinois may one of these days send us seedling fruits equal to any of our own choice productions. There is nothing like cultivating the internal resources of one's own country, and no one is stronger in this principle than ourselves.

SHORT-HORN CATTLE.—We meet with so many erroneous articles lately in the papers, on the history and improvement of these celebrated animals, that it is our intention to commence in our next a series of numbers on this subject, wherein we shall give a fuller, and as we hope, a truer and more complete account of them than has yet appeared in print.

INDEX TO VOLUME II.—This index was printed on the same sheet as the last No. of Vol. II., of this periodical. It is paged by itself, and in the folding of the number, occupies the eight middle pages. It is only necessary to cut open the leaves as usual, when these eight pages of index will be found detached by themselves, and should be placed in front of the volume when it comes to be bound.

VOLUMES I. AND II. OF THE AMERICAN AGRICULTURIST, with tables of contents complete, are now bound and ready for delivery. The farmer's library will be incomplete without these instructive and highly entertaining books. They are more elegantly got up than anything of the kind ever issued from the American press.

LONG ARTICLES.—We have two or three articles in the present number, of considerable length, but let this be no objection to our readers in perusing them. There are subjects occasionally which must be treated at length to do them proper justice, and to divide them into different numbers, would lessen their interest. We do not design our periodical as a mere ephemeral, to be read on its day of issue and then be thrown aside; but we mean to make it a work of permanent value, worthy to find a place for future reference in every intelligent farmer's library.

DEFERRED ARTICLES.—Tour in England, No. 17, Sketches in the West, No. 3, and several other articles are deferred till our next, we wishing to make as much room as possible for correspondence.

☞ PAYMENTS FOR VOLUME THIRD.—It will be recollected that our terms are cash in advance; all those, therefore, who expect the future numbers, will please remit through the Post-Masters. Agents in arrears will oblige us by forwarding all dues.

ORIGINAL CORRESPONDENCE.

DEVON CATTLE.

This valuable and interesting race of animals, in their *purity*, are but little understood in the United States. The fine red cattle of New England, a class almost sufficiently distinguished to warrant their assuming a local cognomen of their own, are supposed by many to be descended from the ancient Devons, so near do they resemble them in many valuable characteristics; and no doubt this opinion gathers weight from the fact, that the first settlers of Plymouth, in Massachusetts, and the adjacent country, sailed from Devonshire, in England, from which it is concluded that the Devons were the original stock brought out with those early adventurers. This, however, is but mere inference, as the Devons, in their purity, are not widely spread through all Devonshire. Still the best native cattle of New England show evident marks of consanguinity with them; and we may at least suppose, that from the many importations of valuable foreign stock made from the counties of Hereford and Devon, within the last fifty years, the best New England cattle have obtained a strong dash of those valuable breeds. Indeed, the impression is almost universal among those not quite well informed in the matter, that *red* cattle, generally, are Devons, although they engross all manner of style, fashion, and quality. Than such vague supposition, nothing can be more untrue; and all this "public opinion," or "*indefinite notion*," to the contrary, the true North Devon is as distinct in his style and character as any race of neat cattle whatever.

Origin.—The Devon is styled by some of the best English cattle authors as an *aboriginal* breed, and is supposed to be a race as old as the Roman invasion of that island, and from the earliest dates, the clean-limbed red cattle of Devon and Cornwall have been celebrated in British annals. For the past century, since the general improvement of their agriculture has attracted the attention of the English nation, the peculiar ancient breeds of cattle have received especial care. Among these, the Devons have been conspicuous; and skilful breeders, selecting from the best forms and blood of this beautiful race, by the application of correct and scientific rules, have brought them to a perfection excelled by no other class of British cattle.

Here let me digress for a moment to remark upon the strange and absurd *notion*, for it is nothing but a notion, that so many of our Americans have imbibed regarding *improvement* in breeding domestic animals. It seems to be supposed by these calculating people, that all which is excellent to a high degree in the present improved farm stock, has been brought in by a "foreign cross," or by the peculiar *hocus pocus* of some "wizard" breeder, through whose magic wand these wonderful improving influences were brought about, instead of the practice of certain, true, and inalienable physiological principles, *which alone constitute improvement. To those simply*, and to the *pure* blood *only* of the race under process of improvement, have the master spirits in breeding succeeded to a triumphant degree. It is high time that all this "twaddle," for I can call it by no more appropriate name, about "foreign crosses" was exploded by persons pretending to any sense. Why, where existed the great excellence of these "foreign" animals that men so successfully used in this "happy cross;" and where *are* now these immaculate paragons that so improved our present peerless Devons, Short-Horns, and others?—or do they go upon the wonderfully sapient principle that two defective animals of different blood and breeds, when crossed upon each other, will produce an excellence in figure and quality superior to both, and which the proper cultivation of neither, in itself, would produce? Out upon such absurdity! We have no evidence of highly valuable and permanent improvement being made upon any breed of domestic animals by the use of these, which were not "native, and to the manner born," unless of a race superior to the one sought to be improved. Such were the progenitors of the magnificent Short-Horns of Northumberland, Durham, and Yorkshire; the massive and stately Long-Horns of Lancashire, and of Ireland; and the beautiful, active, and vigorous Devons of the south of England, long before those eminent breeders, the Collings, the Bakewells, or the Somervilles, were known; and in no instance have "foreign crosses" with inferior breeds been adopted, however plausible they appeared at first, but, in the long run, have been condemned and discarded by all thoroughly scientific breeders. I do not pretend to say, that, for certain purposes, domestic animals may not be mixed in blood to great benefit for adaptation to certain soils, climates, and purposes. This they most certainly can; but with the present imposing array of thorough-bred animals before us, none but a *desperate* and clearly *Utopian* advocate of improvement will attempt to create a new and a standard breed, by *sinking* either of the present highly established races into one of a baser or degraded kind. It should, therefore, be the aim of every breeder to *level up* his domestic stock as near perfection in the peculiar characteristics required as possible, without seeking to degrade that which is already good by an association with downward tendencies. But to the Devons.

It is not my present purpose to discuss how, or by what means the improvement of these, or any other of our valuable domestic animals have been made by the skill of their breeders—this belongs to an essay of another kind; suffice it to say, it has been done in this ancient race to a degree certainly equal to that attained with any breed whatever, and without resort to any other blood, and it may without hesitation be asserted, that no race of animals in existence show more distinct, permanent, and long-established blood-like qualities than the Devon.

Description.—In size the Devon is medium, and compares with the native cattle of our country when lean; but with a greater aptitude to take on flesh when fed, and a much higher degree of proof when slaughtered. The head is delicate and short, with a broad and slightly indented forehead; a high, gracefully upturned, yellowish horn; a clear, prominent eye, enclosed in an orange-colored ring; neat and thin in its face or chaps; a small, delicate muzzle, of a clear orange or slightly-mottled color; the neck finely set on, and originally throaty, with a considerable dewlap reaching to the brisket; but in the best-improved animals of the present day, clear, and without superfluous skin. The shoulder is slanting like that of the racehorse, giving him great activity, and set on to the ribs with the smoothness and beauty of a deer, but well spread at the elbow, developing a deep and wide chest, with a sufficiently projecting brisket. The arm is broad, tapering gradually to the knee, with a leg below of the straightness and delicacy of the blood horse. The ribs arch broadly out from an even back, leaving great compass of body, with a full and deep flank; the loin is broad and level; the hips wide, high, and well spread, giving an amplitude of carcase extraordinary for its *apparent* size; the rump long, with deep heavy quarters; the buttock round, and projecting, running down to a delicate gambril joint, and terminating in a hind leg of surpassing neatness and symmetry; the tail is set on high, and in a horizontal line with the back, of the exact shape and gradual taper of a *drumstick*, terminating in a thick brush at the extremity, with a moderate tuft of white hairs; the skin is of medium thickness, and when on a well-conditioned animal, unsurpassed in handling; the color is a deep blood or mahogany red, with an occasional white udder, or slight white strip under the belly. These, the world over, are the true characteristics of the pure North Devon, and so deeply are these qualities imbodied in the race, that a good judge would as quickly detect a spurious cross in their appearance, as if in a thorough bred Arabian or blood horse. The Devon has, indeed, by partial writers, been styled the Arabian of neat cattle.

Utility.—As an *economical* animal, the Devon may be classed under three different heads.

First, as a working ox. In this important department of American agriculture, nothing can compare in activity, beauty, and close matching, with the Devon. They seem constituted emphatically for the yoke. Their docility, honesty, and vigor, are proverbial. Although not attaining the heavy size of the full-grown Hereford or Short-Horn, on the medium and lighter soils, a pair of Devon oxen annually plow as much land, and as well, too, as an ordinary pair of horses. High crosses of the Devon and native American cattle have frequently come under my observation in working oxen, and in both performance and appearance, nothing could exceed them. They are sufficiently heavy for all useful farm-work, possessing in an eminent degree the horse-like qualities of superior strength, speed, and bottom; and when at maturity, are unrivalled for the stall and the shambles—taking on fat with a facility that no other animal can surpass. A farmer wishing to breed working oxen or steers, has only to select his quota of native cows for that purpose; the finer in form the better, but it matters little what *color* they be, so that their *quality* be good. Let him select a well-bred North Devon bull, and cross upon these cows, and ten to one, so deeply established is the character of the race in the bull, every individual calf will be a mahogany red in color, with a clear, yellow, upturned horn, and possessing such decided Devon characteristics, that, if steers, at three years old, dead matches could be made of any couple in the herd. To such farmers as use ox-labor on their farms, (and were our working cattle of a better quality, it would be much more extensively practised,) it is unnecessary to speak of the enhanced value of raising a variety so easily matched, of such uniform beauty in appearance, and of great activity in their labor. It is almost superfluous to remark that a still higher cross, to three fourths, seven eighths, or even thorough bred, will give an increase in value for all useful purposes; and when it is known that this class of cattle at six years old will girth behind the shoulders six and a half to seven feet and upward, in fair working condition, all cavil will be silenced.

Second, for the shambles. At the Smithfield market, in London, the flesh of the Scots and Devon cattle hold the first rank; and with a beef-eating nation like the English, an appeal from their judgment will scarcely be entered. The flesh is beautifully marbled, or intermixed, the fat with the lean. Fed side by side with others in equal condition, when stalled, no animal has exceeded them in accumulating flesh in proportion to the quantity of food consumed. In feeding, they have been thoroughly and severely tried with the Short-Horn, the Hereford, and other breeds of England. They are early at maturity; fully so at six, and profitably fed and slaughtered at five, four, and even three years old. To illustrate this part of the subject, I submit a few out of a long list of weights both in this country and in England.

In 1831, a pair of three-fourths bred Devon oxen, (their grand dams being native Connecticut cows,) bred by Messrs. Hurlburt of Winchester, Connecticut, worked from steers until six years old, and then fed fifteen months, were slaughtered in New York, weighed as follows:—

Near ox, Carcase 1,438 lbs.
Hide - 117 "
Tallow 175 "

Profitable weight 1,730 lbs.

Off ox, Carcase 1,528 lbs.
Hide - 115 "
Tallow 213 "

Profitable weight 1,856 lbs.

These were closely matched, and of a deep red color.

Mr. E. P. Beck of Sheldon, Wyoming county, N. Y., had a thorough-bred stag, 3 years and 10 months old, kept well till four months previous to being slaughtered, which was in March, and only stall-fed for about three months. His profitable weight was 1,200 pounds, hide and rough tallow included; the latter was over 100 pounds.

Mr. William Garbutt of Wheatland, Monroe Co., N. Y., had a dry, thorough-bred cow, nine or ten years old, turned out to grass in the spring, where she run all summer, and fed only about two weeks before her death. She died in the pasture with murrain. Had 160 lbs. rough and kidney tallow. None of the meat was tried.

Mr. Henry Thompson of Baltimore, had a thorough-bred cow which ceased to breed. She was pastured on grass through the summer, without extra feed, and slaughtered, weight as follows:—

Carcase	715 lbs.
Tallow	156 "
Hide	74 "
Head and tongue	31 "

Profitable weight, 976 lbs.

In 1838, I had a fine Devon cow twelve or fourteen years old, which met with an accident, disabling her from further breeding. She was turned out to a fair grass pasture in the spring; was fed on nothing else, and slaughtered in the fall. She was a most beautiful creature in shape, and the fattest grass-fed animal I ever knew. Her net weight was a trifle over 800 lbs.

From registers of cattle in Smithfield market, published in the British Farmers' Magazine, I extract the following weights of steers, slaughtered, there:—

One 5 years 11 months old, dead net weight 1,593 lbs. One 3 years 7 months old, dead net weight 1,316 lbs.; rough tallow 160 lbs. One 3 years 10 months old, dead net weight 904 lbs.; rough tallow 128 lbs.

Count De Gourcy, an intelligent French farmer, who lately made an agricultural tour in England, remarks that the late Earl of Leicester's Devon steers, kept on his Holkham estate, at four years old, when slaughtered, weigh 1,000 to 1,200, and even 1,400 lbs.; and that the Duke of Norfolk's (near Bury in Suffolk) Devon steers, weigh full-grown, 900 to 1,000 lbs. It may here be remembered, that by the improved breeding, the Devons are matured for the shambles one to two years earlier than formerly. From four to five years of age are now considered fit periods for slaughter.

It thus appears that the Devons are earlier grown, and show a greater average weight than the common cattle of our country; and, from their compact forms, fine handling, and light offal, that they will take on flesh with greater rapidity and less food, there can be no questioning. The quality of Devon beef is highly superior. I have had slaughtered from my own stock three animals of Devon blood mainly, grass-fed only, and in a house-keeping experience of some fifteen years, I never had so good beef, either fresh or salt.

Third, as milking cows.—On this very important item of excellence, I regret exceedingly that my information is so meager. The *thorough-bred* Devons in America are comparatively so few, and so little pains have been taken to test their milking qualities, that I have been unable to gain little exact intelligence on the subject—what I have, however, is submitted.

Mr. Thompson's imported cow "Sukey," (or Flora,) of Baltimore, gave 22 quarts, beer measure, (about 25 quarts wine measure,) of milk per day, in the months of June and July, 1831, on grass only. This milk was of the richest quality, and produced superior yellow butter.

Mr. E. P. Beck of Sheldon, before mentioned, exhibited at the late State cattle-show, at Rochester, two fine thorough-bred Devon cows in milk. They, with another not exhibited, 4 months after calving, on quite ordinary pasture, in a dry time, a few days before driving to the show, yielded as follows:—

No. 1, 18 quarts per day, beer measure;
No. 2, 20 ditto ditto;
No. 3, 22 ditto ditto; equal to about 69 quarts wine-measure. This milk was all of rich quality, and made excellent butter.

George Patterson, Esq., of Maryland, an observing and scientific breeder, who owns decidedly the largest and finest herd of pure Devons in America, some 60 or 70 in number, remarked to me, that his cows were better milkers, and yielded more butter on the average, than any others he ever kept. His stock is descended from some of the best animals of Mr. Bloomfield, in England, the principal breeder of the superior herd of the Earl of Leicester, on the Holkham estate. Mr. B. once publicly challenged all England to milk 20 cows *of any breed* against his herd. The challenge was not accepted. This is no proof, however, that his cows could not be beaten, which they undoubtedly could, as the Short-Horns are acknowledged, out-and-out the best milkers in England.

Count De Gourcy states, that Mr. Bloomfield's cows averaged each 4 pounds of butter per week, the year round, which is equal to 208 pounds a year; a large yield. The Count also mentions, that another tenant of the Earl of Leicester prefers Devon to Ayrshire cows. They yielded him more milk and butter. I merely state this last fact as written, meaning no disparagement to the Ayrshires, believing them valuable milkers.

Added to all this, the Devon cow has in England long held a distinguished place as a dairy animal of high order, by the best farmers, and maintains a rank in many localities, second to none others whatever.

In conclusion, I give you a letter of William Garbutt, a man of facts, and of close observation, who obtained his fine Devon cattle many years since from the herd of the late Hon. Rufus King of Long Island, sent him direct, by the late Earl of Leicester, then Mr. Coke

Wheatland, Nov. 6, 1843.

L. F. ALLEN, Esq.,—My Dear Sir: I fear that I can not give you the information wished for, so particularly as you desire, in relation to the Devon cattle. Owing to the hardness and dryness of my home-farm, I found it very inconvenient to raise stock to any amount, and in 1835 I purchased and stocked the Sheldon farm; since then I have paid very little attention to neat stock. I have, by experience, become sufficiently satisfied relative to the value of the Devons for agricultural purposes, as adapted to this section, say western New York but have not been sufficiently exact, as to give in quarts and pounds the results of their milk and butter products.

I can repeat what I have frequently stated, and know to be true, that the Devons, as a breed of neat-cattle, on the whole, are not excelled by any, for labor, beef, or dairy, in *quantity*, or *quality*, in *proportion* to the food they consume.

They cross well with our native cattle; better than any other of the imported animals, and wherever the cross has been tried has almost invariably produced good stock. I have been in possession of them nearly twenty years, and have raised many valuable animals, and with but very few exceptions, it is rare to find a poor animal of the breed, that has had any chance at keeping. I always fed uniformly well, but never extravagantly, in order to produce a great size. One cow suckled two calves four months; the calves were then fed with roots or mill-feed, and straw, until spring, so as not to lose flesh, *but not to improve in condition.* Straw and roots have generally been my winter forage, and clover their summer pasture.

The oxen are sufficiently large for labor, and will weigh from 1,000 to 1,500 lbs., grass fed. They are very active, docile, and easily made tractable; are remarkably good travellers, hardy, and easily kept. The cows will weigh from 600 to 800 pounds, grass fed, and give a fair quantity of very rich milk. Their beef is excellent, being very fine, and well mixed with fat and lean, surpassing any other breed in that respect. They fatten quick, and always prove well when slaughtered.

The bulls, generally, are smaller than the oxen, and inferior in beauty, but the proof of a good sire is the value of his stock; and there are no other cattle which will so generally give the color, sprightliness, and general features of the breed to their offspring, like the Devon bulls.

Mr. J. A. Frost of Rochester, who perhaps has bought and slaughtered for the past 20 years, more cattle than any other man in western New York, gives it as his opinion, that the Devons are the most valuable cattle in this country for beef. I am glad to learn that you have resolved to let the public know their true value; but you must be careful not to over-rate them, or it will produce a reaction. When we state facts relative to any particular variety of stock, we should mention the poor, and the middling, as well as the good ones, for extraordinary animals are rare in all breeds. One very valuable trait in the Devons, is their general uniformity. There is one striking fact which is well known in this section; that wherever there are any Devons to be found, the eastern buyers are certain to pick them up as soon as the owners will part with them.

Yours most sincerely,

WILLIAM GARBUTT.

From all this evidence, it will be seen that the Devons are distinguished as a highly valuable race of cattle; that on light and medium soils, where laboring oxen are required, and an active, hardy, and *deep-colored* animal is preferred, they are superior to any other breed known. Let me be distinctly understood. I pretend not to place them in competition with the noble and unrivalled Short-Horns, as best adapted to the richer soils, and more luxuriant pastures of the United States; but aside from these, and even there too, they are every way a most desirable and beautiful class of animals. I have seen the Devon crossed with various other breeds; but the most beautiful and luxuriant admixture is that with the Short-Horn. This is the only alliance of the latter, with another breed, where the exaltation of the one did not seem a degradation of the other. The cross is remarkably rich, blending the fine points of both in perfect harmony. In a visit made a year or two since to John A. King, Esq., of Jamaica, Long Island, who inherited the Devons left by his father, the late Hon. Rufus King, I saw a beautiful *white* cow, with all the characteristics in shape, and proof, even to the clear upturned horn of the Devon, whose sire was a Short-Horn bull. Her dam was one of Mr. K.'s Devon cows. He stated to me that of all cows which he ever kept, none in their good qualities, ever equalled the Devons, and their descendants from a Short-Horn cross.

Lemuel Hurlburt, Esq., of Winchester, Ct., who has kept the Devons since 1821, which he obtained of the late Mr. Patterson of Baltimore, asserts that the crosses of his bulls with the native cows of his neighborhood, have added greatly to their value; and his long experience has satisfied him of their great excellence.

Within *my own* knowledge, not more than half a dozen importations of Devons have been made into the United States by different individuals. In 1817, Messrs. Patterson & Caton of Baltimore, received several choice cows, and bulls, from Mr. Coke's herd. Shortly after that time, Mr. Coke also sent to Mr. King of Long Island, a bull and several cows.

In 1825, Mr. Henry Thompson, a merchant of Baltimore, imported a bull and two cows, very choice animals, bred by Mr. Childs of Bewdley, in Devonshire. Some of the descendants of this stock were afterward owned and bred by George Patterson, Esq.

In 1839, Mr. Francis Rotch of Butternuts, Otsego Co., N. Y., imported two Devon heifers from England, which are now in that neighborhood. In the same year, a Mr. Vernon imported into Genesee county, in this state, a bull and two heifers, bred by Messrs. Davy of North Molton, Devonshire. The heifers, unfortunately, both died about a year after their arrival, with the foot-ail, and their only descendant is a heifer, now two years old, which, together with the bull, are owned in that county.

Other importations may have been made, but they are beyond my knowledge; and although this valuable stock is well known and highly appreciated in their native country, where choice animals for breed are now sold at prices ranging from 30 to 100 guineas, ($150 to $500,) the Americans have been slow to estimate their worth. So high a character have the Devons achieved in England, that at the great shows of the Royal Agricultural Society, they are allowed a distinct class by themselves, where they take rank side-by-side with the other favorite and most celebrated breeds. What higher merit can be awarded them? Costly likenesses of many prize Devons have been taken by the first cattle-painters, which are inserted with great truth and spirit on steel plates, in the London Farmers' Magazine. The liberal and enterprising breeders of our country have usually preferred the more imposing Short-Horns, which have almost entirely engrossed their attention, to the exclusion of all others. With myself, although for many years a breeder, and an unwavering advocate of the Short-Horns, of which I have a considerable herd, yet I have long been an admirer, and by a close observation for many years past, am convinced of the positive value of the Devons in extensive sections and localities of the United States, and particularly in the light pasturage regions of the South. I have acquired a promising embryo-herd from the best materials in the country, and am determined to disseminate, so far as lies in my power, this valuable race into those sections, where the Short-Horns, for any reason, are not preferred. Of the merits and true character of these animals, but a small portion of our cattle breeders are aware; only now and then an individual *really* knowing what a true Devon is. They are, however, rapidly growing in public favor, and probably but few years will elapse before they will become widely distributed over the land.

L. F. Allen.

Black Rock, Erie Co., N. Y.

ORIGIN OF CHESS

I see in your paper a subject under discussion, which has occupied a place in most agricultural journals in years past, viz: the origin of Chess. It is not new to see the subject in competent hands either; for gentlemen on both sides have evinced extensive observation, and a good degree of scientific research. The *facts* which have come under my own observation, are rather of a negative character, and can only be classed with that kind of evidence called *circumstantial;* but this, poor as it is, may lead to conviction, if there is enough of it.

If chess is the original of wheat, or oats, or both, as Mr. R. L. Allen would have us believe, or the offspring of either, or both, is it not a little singular, that not enough of the article grows in the state of Maine to cause one to hear it mentioned once a year? I have been a grower of wheat and oats for more than twenty years, and never saw it on my farm *but once.* I think I might seek it in the whole county of Somerset without finding half a pint. Is it because we sow spring grain? Oats is a spring grain in Wisconsin as well as here. Why should I never have seen or heard of it in oats in forty years, all which time I have been conversant with that crop? I can scarcely believe it is for want of observation, because I have been closely investigating a popular error, or what I think such, if this be not one, viz: the change of barley to oats. The belief in this metamorphosis, is about as prevalent in the *east,* as the other is said to be in the *west.* Still it is easier to talk about it, *and tell what our friends* say about it, than *to see it.*

I have often been told, "if my barley is fed off, the stalks will produce oats." For nearly every year of the last ten, I have had oats and barley adjoining my sheep-pastures, as I have been alternately cultivating my pastures with white and green crops. The lambs will every year get through the fence and crop some of the grain; and I have been on the *lookout* for oats on my barley-stocks, *but have never seen them.*

> "For optics nice it needs, I ween,
> To see such things as can't be seen."

But do I not see many heads of oats where the crop has been fed? Yes, certainly, and for the plain reason, that oats, when fed off at nine or ten inches high, tiller amazingly, and *my* barley will not, under like circumstances, head at all. I never have, with all my care of sinking my barley in strong brine, *wholly* divested it of oats. Hence the deceptive appearance.

A few years since we had repeated statements in one of our agricultural papers, of potatoes (small ones I presume) *originating* on a stem of the common gilliflower. Whether this potato proved a valuable variety, I have never learned; but there are several persons in a neighboring town as confident they saw this phenomenon, as was Cotton Mather, that witchcraft existed in Salem.

I do not write to explain or deny any fact stated by Mr. Allen; for I do not gather *certainly,* that he *saw* either of the samples stated, except the oats in Wisconsin, and I would put it to the ingenuous candor of that gentleman to say, if it was as he thinks, *if it does not prove a little too much?*

James Bates.

Norridgwock, Me., 22d Nov., 1843.

CULTURE OF COFFEE.

I had almost forgotten the promise I made during our pleasant intercourse at my residence last summer, to give for the Agriculturist a short account of the cultivation of coffee and other products in the northern sections of South America, and the province, or rather state of Venezuela. At the time I traversed that country, I did not feel that deep interest in things pertaining to the cultivation of the soil, which would induce minute observation of all that related to the products of the country. My observations were more of a general nature, and were directed to the cultivation of coffee, cocoa, and indigo, as subjects of interest to a traveller, and connected intimately with foreign commerce.

The luxuriance of vegetation in those valleys, which lie between the various branches of that great range of mountains which passes through the South American continent, far surpasses all that we meet with in this country. The valleys of Caraccas and Aragua, consist of a deep, rich, black loam, equal in fertility to the most productive portions of the Mississippi or its tributaries. Throughout these, and on the sides of the adjacent mountains, are the coffee plantations, scattered here and there, small cultivated spots in the immense tract of neglected and uncleared waste. I shall not soon forget my first impressions of a coffee-estate, as I caught sight of it in the distance, or when actually within its precincts.

We were on Las Vueltas or the back of the mountain, and descending by a gently sloping zigzag mule-path, shaded by lofty forest-trees on our left, and on our right a steep precipice. Far below this lay the city of Caraccas as on a map, its spires glittering in the sun, and its surrounding estates stretching many miles along the beautiful and cultivated valley. On the winding road to the city, were many hundred mules with their burdens, carefully picking their way down the steep sides of the mountains. In the distance was seen the Silla of Caraccas, 10,000 feet above the level of the sea, while all along the valley, the verdure and harvest hues were truly gorgeous. The sugar-cane, the changeable tints of the waving barley, the green maize, the orange groves, and above all, the distant beauty of the coffee plantations, contributed to heighten the effect of a scene to me exceedingly attractive, and one well worthy the pencil of a master hand. Many other things conspired to make my first distant view of a coffee plantation with its accompanying scenery, very interesting, yet a close inspection was needed to appreciate its beauty.

Just before entering the city of Caraccas, we passed a large and imposing entrance, with a patriotic inscription overhead. Finding it to be a coffee estate, we dismounted from our mules, and rambled through it. Imagine an extensive grove of trees, the branches of which, commencing about fifty feet from the ground, formed a large, compact, umbrella-like head, with dark-green, thick, glossy leaves, similar to those of the Cape Jessamine, and covered with brilliant scarlet flowers the size of the hand. These trees called the bucaris, are planted about thirty feet apart, their leafy heads forming a dense canopy impervious to the rays of the sun. The coffee-tree is planted under these about ten feet apart, in straight rows. At two feet from the ground the branches radiate horizontally from the main stem, which is allowed to rise to the height of 8 or 9 feet where its growth is stopped by splitting the top, and placing wedges in it, the fruit being better and more abundant where the growth of the tree is thus retarded. The tree was now in its full bloom and ripeness, exhibiting conical forms of about six feet in diameter, with leaves of a glossy green, acuminate, and slightly indented. The fruit grew from the bark about the size and shape of a cranberry. The branches were loaded, like the arms of an oriental beauty, with beads of every tint. Some with the beautiful white flower, similar to our white jessamine, in continuous clusters on the top of the horizontal branches; others with the fruit of every shade, from the palest green to emerald, then the rose, the crimson, and last of all a chocolate-brown the sign of maturity. When to the refreshing shade and stately appearance of the bucaris, and the graceful foliage of the coffee-tree, is added the exceeding fragrance of the coffee-flower, frequently perfuming the air for half a mile or more, the thick velvety turf beneath them, studded with flowers of the most gorgeous colors, and adorned with little rivulets, deemed necessary to convey moisture to the roots of the plants, nothing can be more beautiful. As I rambled through the rows of coffee-trees entirely protected from the sun, with the velvety turf beneath my feet, and birds of the most brilliant plumage singing sweetly over my head, I thought that no crop or plantation whatever could possibly compare with it in beauty, and that if the cultivation of the soil here on Long Island was attended with such pleasures, mercantile life would find but few votaries. Nowhere else, however, but in this valley and that of Aragua, did I see the plantations shaded by that beautiful tree, the bucaris. It requires too long a period to obtain the tree of sufficient size for shade. Throughout the West Indies, in Porto Rico, Hayti, Jamaica, and Cuba, I observed that they generally planted the banana or plantain on the sunny side of the coffee-tree, to mitigate the heat of the sun by its glossy, pea-green leaves of 6 to 8 feet in length.

When the berry becomes of a chocolate-brown and is quite ripe, it is picked by women or young persons. It is then carried to a platform which covers sometimes an area of several acres, and is made of plaster and lime, very hard and dry. The berries are then spread out in the sun to dry. After being thus dried, they are placed in a mill similar to a cider-mill, where a heavy wheel passes over them and takes off the husk; it is then cleaned by a common fan, and placed in bags for exportation.

The cultivation is simple, and I see no reason why it could not be advantageously introduced in our southern states. It flourishes well on the Jamaica mountains, at a height above the sea, where the climate is quite as cold as South Carolina, Georgia, or Louisiana. The labor is very light. The tree when once planted will bear thirty, and sometimes fifty years, with scarcely any attention. The preparation for market is very simple, and can be performed by children. It would be equally profitable with cotton, and I think far more so than either rice or sugar, without the sacrifice of health attending the cultivation of the former, or the terrible using up of flesh and muscle demanded by the latter. The only point to be ascertained is, whether it will bear the climate of our southern states; if so, there can be little doubt that for productiveness and facility of culture, it will be preferable to any other southern crop. I hope some of the southern readers of the Agriculturist may be induced to give the coffee-tree a trial, and report the result. It would be a very valuable addition to our agricultural productions for home consumption, and as an article of export; the demand abroad is almost unlimited.

There are many articles of foreign produce which can without doubt be profitably cultivated in this country. We have every variety of soil and climate, and there is no reason why we should resort to other countries to obtain articles for the cultivation of which nature has provided us with abundant resources. The Agriculturist in striking out a new path for itself, and in which it has met with unusual success, has given this subject, I am aware, much attention, and many able articles have recently appeared on the cultivation in this country of madder, sumach, indigo, &c. I hope the subject may not be given up, but that every possible effort will be made to increase our agricultural wealth by the encouragement and introduction of new products.

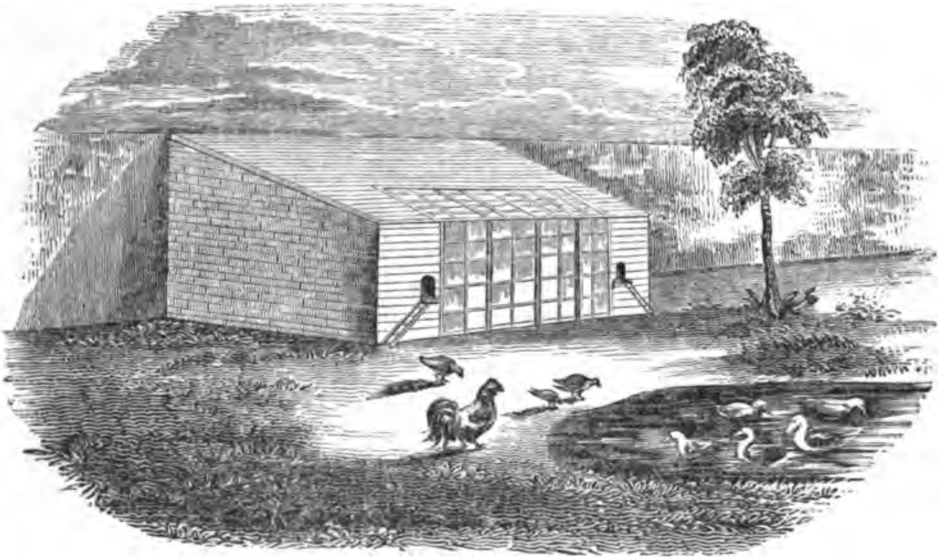
S. B. Parsons.

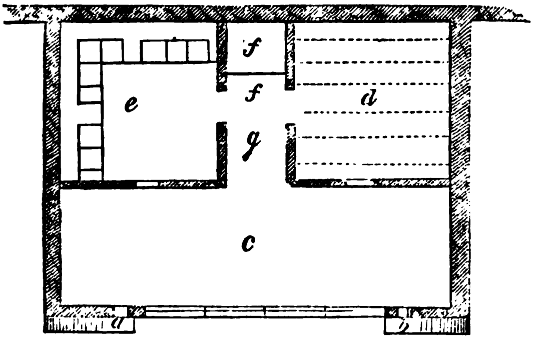
Commercial Garden and Nursery,
Flushing, L. I., 11*mo.* 23, 1843.

AVIARY, OR FOWL-HOUSE.

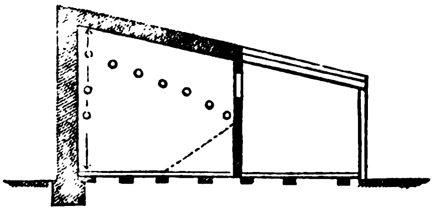
Agreeably to your request, I send you herewith a view of my fowl-house. The accompanying plan and reference render a particular description unnecessary. The north, east, and west sides of the house are of brick; the floors are of cement to keep out rats.

AVIARY, OR FOWL-HOUSE.—(Fig. 2.)





Ground Plan.—(Fig. 3.)



Section through d.—(Fig. 4.)

a, b, Apertures for admitting fowls, with slides for closing; c, place for feeding; d, roosting-room; e, laying-room, with secluded nests; f, bin for feed; g, passage. Scale 16 feet to an inch.

Fowls will not lay well in winter unless they have during the day a dry, light, and warm apartment in cold and stormy weather. The room marked *c* is designed for this purpose; it is lighted in front and above by sashes, one of which, in front, is hung with hinges for the entrance. If necessary, a ventilator may be added to the roof, or a window in each end.

H.

Astoria, December 6th, 1843.

We have personally examined the Fowl-House of our correspondent, and think it the most complete one we ever saw.

CULTURE OF HEMP-SEED.

In the April number, vol ii., of your paper, I gave a brief explanation of my mode of cultivating hemp-seed. In the number for August, I promised, if any improvement in cultivating hemp-seed should be made, I would communicate it for publication, in the American Agriculturist. From information derived from several intelligent hemp-growers, concurring with my own experience, I am convinced, that a greater quantity of hemp-seed may be produced from an equal quantity of ground, all other circumstances being equal, by suffering only *one stalk* to grow in a hill, than any number *above one*. Assuming that only one stalk should be left in a hill, I would recommend the following mode of cultivation.

The ground, intended for hemp-seed, should be highly manured. This should be applied late in the fall, and plowed under by a good plow, turning up the soil to the depth of at least six inches, and it should be suffered to lie rough till spring, allowing *no stock to run on it*. The winter freezing will completely pulverise the soil, a point of much importance in the cultivation of hemp-seed. The ground should again be plowed in the spring, about the latter part of March, or early in April (in our latitude). But care should be taken not to do this, until the soil is sufficiently dry to pulverise completely. A light harrow should then be run over it to level the ground slightly, and it should be chequered off immediately, three feet each way, with a light one-horse plow, and planted by dropping fifteen or twenty seeds at the crossing of each furrow, somewhat scattering them, and covering with a hoe one or two inches in depth. It is proper to remark here, that hemp-seed ground should be kept as light as possible; and hence it should be trod as little by horses in plowing, harrowing, etc., as may be, and never when the soil is so saturated with water, as to cause the particles to adhere, in the form of mortar.

Early sowed hemp-seed generally succeeds best; and as hemp is a hardy plant, standing severe white frosts without injury, it may be planted as early in the spring as the season will admit of, the ground being prepared as above directed. In our climate hemp will appear above ground in about a week after planting, and when eight or ten days old, a light harrow should be run *over the hemp*, drawn by a single horse, walking in the space between the rows, so as not to tread on the young shoots. The harrow, by running over the hemp may destroy a few of the plants, but there will remain, uninjured, more than will be necessary to leave, and those left will be greatly benefited by the harrow loosening the soil among the plants. My practice is then to harrow *immediately*, in the same way, in the opposite direction. This, however, should only be done, when the first harrowing shall have left more than enough plants, and when there is just reason to believe the second harrowing will leave at least four or five plants in each hill. If the hemp-seed shall have come up well, it will readily admit of this second harrowing, without danger of too much reducing the number of plants in a hill. The two harrowings, if performed when the soil is not too wet, will leave the ground in fine condition, and perfectly free from weeds. Before this operation is performed, if any of the hills are found without hemp, in consequence of the cut-worm, or other insects destroying it, they should be replanted. The plants left after the harrowing, will grow off with surprising rapidity, and will get far ahead of the weeds, which will thereafter make their appearance. The hemp should now be thinned out by hand, so as to leave not more than five stalks in a hill, and these not crowded together. When the hemp shall have attained the height of ten or twelve inches, it should be worked over with a light one-horse plow, or cultivator, narrow enough to pass between the rows, without endangering the hemp. If the ground is not very clear of weeds, and very light, it will require to be worked over again when the hemp is between two and three feet high; and if the hills shall have become any way foul with grass or weeds, they should be worked over with the hoe. It is generally best to perform this operation immediately after the first plowing. But if the hill is then clear of weeds, etc., it may be postponed till the second plowing. After the second plowing as above, the hemp should be again thinned, so as to leave not more than *three stalks* in a hill. In general nothing more will be necessary till the hemp gets into blossom: but if the ground is very foul, more work may be necessary. Great care should be taken to keep seed-hemp perfectly clear of weeds, until it shall have attained such a growth as to shade the ground completely. Weeds that shall thereafter grow will be so puny as to do no harm. If some scattering ones shall have been left when worked over by the hoe, and are likely to attain such a size as to injure the hemp, they should be carefully cut out. I use the common hemp-hook for this purpose. In working hemp-seed with the hoe, only a little earth should be put about hemp plants.

It is necessary that the female hemp should be impregnated by the pollen of the male stalks, to enable it to produce good seed. But if there are hemp-fields in the vicinity of the seed-hemp, pollen, in abundance, will be furnished by them. If there are none, then I would recommend, that one week after the hemp planted for seed begins to blossom, all the male stalks, which can be distinguished as such, should be cut down, in order to give more room and air for the residue. The male hemp, which thereafter blooms, should be suffered to remain until it shall have shed its pollen, when it also should be cut; and *at the same time*, the most unthrifty female plants, where more than one shall be found in a hill, should also be cut down. After this last and complete thinning shall have been effected, there will be left only one stalk in a hill; that is, one plant for each square yard, or 4,840 per acre, if none be missing. It sometimes happens, though rarely, that all three of the plants left, at the second thinning, will be of the male species. Supposing there shall be forty such hills per acre, there will be left 4,800 seed-bearing plants, if no untoward circumstance shall have destroyed part of the others. If the ground be very rich, the cultivation complete, the thinning out accomplished in due time, and the season very favorable, each stalk will yield, upon an average, one pint of seed, and consequently, under very favorable circumstances, there may be a yield of 600 gallons, or 75 bushels per acre. This great yield can only be expected where everything turns out to the very best advantage; but, as many contingencies may concur in reducing the crop, it will rarely happen that more than fifty bushels will be realized, even in the most favorable seasons. But as the seasons for rearing hemp-seed are variable and uncertain, it would not be safe to calculate upon more than 30 bushels as an average for five or ten years in succession. When hemp is planted and thinned out, as herein directed, the single stalk left in a hill branches out, and grows to a great size. It is very important that the thinning process should take place at as early a period as possible, consistently with the directions given above, in order to afford the seed plants sufficient space for branching, while they are yet in a vigorous and growing state. If this is not done in due season, there will be a considerable diminution in the product.

Hemp intended for seed should be cut soon after the leaves begin to turn yellow. At this period there will be much seed that has not yet become ripe, but more will be lost by the shattering out of the seeds already ripe, by birds, wind, etc., than will be gained by the ripening of others. In cutting, the stalks should be agitated as little as possible, as hemp-seed shatters out very easily. The mode of sowing and thrashing out the seed has been fully explained in my essay on the cultivation of hemp. A. Beatty.

Prospect Hill, Ky., Nov. 1843.

CULTURE OF PINDARS.

From the experiments I have made in cultivating the pindar or ground-pea, I think you would do well to call the attention of your southern readers to that subject. I planted, the 18th February last, three acres in pindars, in rows five feet apart, the peas about twelve inches apart, in a common small furrow made with a bull-tongue plow, on perfectly level ground, having first broken up and harrowed it well. The weather afterward in March was very cold, wet, and unfavorable, and killed many of the peas which had sprouted, so that I had a very poor stand; they, however, grew finely, and interlocked across the rows, and covered the ground pretty well. On the 27th October, I began digging (for fear of frost) by loosening the ground a little round the bunch with an iron fork with three prongs, each above thirteen inches long, and then pitch the fork under the top root and pry it up; a hand follows and lifts up the bunch, most of the peas adhering to it, and shakes the *sand* (dirt we have none) all off, and lays it out straight to cure like hay; when sufficiently cured, tie up in bundles the proper size for a cutting-box, and stow away for winter food for horses, cows, &c., than which there can be nothing better or more nutritious. I cut a bundle of pindars, peas, tops, leaves, and roots, and then a bundle of rice with the grain all on, and thus mix them together, to feed my work-horses, and milk-cows, and find them all doing better than on any food I have ever tried here. The pindars that are torn from the vine are partly left on the top of the ground, and can easily be picked up after a rain; I then turn the hogs in and they gather the balance, and fatten as finely on them as on corn. Our poorest land will yield fifty to eighty bushels of the peas, and over a ton of hay per acre, and, altogether, I regard it as one of the finest crops the southern farmer can raise. If we could afford to give an entire crop to the land, I am persuaded it would be quite as good as a crop of your best red clover to fertilize it. There has been a mistaken policy pursued, almost universally, in cultivating the pindar, by covering over the top with earth when they begin to bloom; this is not only unnecessary, but positively injurious, although the top, or vine, grows straight up at first, yet when it is time to seed, the small fibres on the end of which the pea grows arise, the vine inclines to the ground until it finds a proper location, and then extends its branches two, three, or four feet in length in every direction, touching the earth. The only cultivation requisite, is to keep the ground loose and clear of weeds and grass, and as level as possible, so that the fibres on which the pea grows can penetrate the ground easily. I intend, next year, to plant pindars in hills, or, rather, in checks, two feet apart each way, which will cause them to grow in upright bunches, yielding more hay, and will be easier dug, and, I think, will probably yield as many peas.

For the last three weeks I have kept sixty sheep on five acres of sweet potatoes. They have eaten all the leaves and most of the vines, and have evidently improved very much. This does not hurt the potatoes, and the land gets all the benefit of the manure.

We had our first white frost on the 28th October, but so very light as to hurt nothing; since which we have had no more, and probably will not before next full moon, 6th December. Last year our first frost was the 18th November, and very severe; in 1841, the same as this year. Last spring we had frost as late as 29th March. We do not generally have frost after the 10th February. We have had an unusual quantity of rain the past summer and fall, which injured our little crops here very much, particularly sweet potatoes on very level land.

The grape is about receiving that attention it so justly merits here, from a neighbor of mine who possesses the proper degree of energy, industry, and practical knowledge, (having spent his youthful days in the Rhenish vineyards,) to succeed with anything he attempts. He came here and settled in the woods last February, and has already ate grapes of his own raising; besides, he is a farmer in every other respect, and his improvements already, are well calculated to put us all to the blush. I trust his example will have a good effect on the whole neighborhood; we have needed such stimulus here bad enough. I have no doubt he has collected more manure, and made more compost for the benefit of his land, in the last nine months, than every man within nine miles of him has done in the last nine years. There are others, however, here, who are not neglecting entirely their agricultural interests. John J. M'Caughan.

Palmetto Farm, Mississippi City,
24th November, 1843.

MULES FOR AGRICULTURAL PURPOSES.

The great value of mules, for agricultural and economical purposes, has long been known and generally acknowledged. By those who have given them a thorough trial, their decided superiority to horses is universally conceded. Why then have they not been more generally introduced into the United States, whose citizens are keen to perceive whatever is calculated to promote their own interest? We believe this neglect arises not from a deficiency of sagacity, but from an excess of pride.

In his best estate, this despised hybrid has not the fineness, symmetry, elegance, and commanding action and appearance of the well-bred horse; and in the New England states, where they were first introduced to any extent, they were the offspring of such worthless progenitors on both sides, that it was no wonder they never became general favorites. They were first bred almost exclusively as an article of *commerce*. The market for them was found in the West India islands, where a just taste or nice discrimination did not exist, and where they were estimated, as recruits for an army, only by the number of ears. Diminutive, badly-formed little brutes were imported for the sires, and the only quality considered essential to him, was the certainty of his perpetuating his deformities whenever an opportunity offered. The mares used for this purpose, were such, generally, as were fit for nothing else. It would have been singular, with such an exhibition of qualities, that their descendants should ever have been introduced as domestic favorites. They were tolerated only as an article of profit, and when the markets, first in the West Indies, and afterward in the southern states, were cut off, they were at once unceremoniously struck from the list of northern stock.

The breeding of mules, however, has been wisely taken up by our western and southern farmers; and throughout the slave states especially, where the stock is necessarily exposed to rough usage, they are considered as an invaluable substitute for the horse. Much expense in the importation of Jacks, and discrimination in breeding, has been there applied, and the result is, that they have an admirable race of animals, every way suited to their wants. Occasionally, we have seen fine specimens in New England, New Jersey, and the southern part of New York, and by their owners they were universally held as much superior to horses of the same weight, for all purposes of utility. A passably good animal is seldom valued at less than $100, and sometimes as high as $200 and $250. A. De Russey, Esq., of New Jersey, showed me a pair of mule colts, bred from fine blood mares, for which he had been offered $200 at weaning age, but he expected to get $200 each for them when fairly in harness. I have seen several other pairs at the north, for which $400 had been repeatedly offered and refused. These facts show that wherever they are properly bred, properly trained, and properly looked after, their value is fully appreciated even in this region.

It is from a desire to the more general introduction of this valuable animal on the farms throughout our northern states, that I shall submit the following brief summary of facts, in their favor. Not having much personal experience of their good qualities, I must draw somewhat from the experience of others. S. W. Pomeroy, Esq., of Massachusetts, wrote a prize essay on mules, in 1825,* which is altogether the most comprehensive, yet condensed and practical article on the subject, I have seen, and from this I shall take the liberty of making some extracts.

There is no doubt, that the value of the mule, like every other animal, depends almost exclusively on that of his sire and dam. No good foal can be relied on, except from choice parents. The best Jacks are supposed to have originated, where the perfection of horse-flesh has been found; viz., in the dry, sandy region of Arabia. It is doubtless from this source, that the Jacks of Malta, among the most valuable ever brought to this country, have been derived; while the best and most spirited race of the Spanish Jacks have probably had a similar, though somewhat remoter origin; having been introduced into that country from Morocco, by the Moors; these being direct descendants of the Arabian ass. Though not possessing the larger size, they have more symmetry, spirit, endurance, and intelligence, than the slower and more unwieldy ass of other regions; and it is from these races, and large, well-bred, roomy mares, that the best mules in this country have been produced. General Washington had a Maltese Jack sent him from Marseilles, by La Fayette, in 1787, which produced for him a valuable race of mules; and from him and a Spanish Jennet, a present from the king of Spain, he bred Compound, a famous stock-getter.† From these two Jacks, were bred some of the best mules the country at that time afforded. General Washington used his best coach-mares for this purpose, and his judgment in this practice was shown by the result. After his decease, eight of his mules sold for upward of $1,600. G. W. P. Custis, Esq., who inherited some of this stock, says: "As to my opinion of the value of mules, I shall always appear extravagant. I have scarce a horse on my estate for agricultural purposes, nor would I accept of one as a gift. Mules live longer, and eat less; and by their strength, patient endurance of slender pasturage, privation, and hardship, are better suited to our slaves than any other animal could possibly be." This opinion is strongly corroborated by an official report of a highly intelligent agricultural committee in South Carolina, in 1824; which reported, that "the annual expense of keeping a horse was equal to his value; that a horse at four years old would not often bring more than his cost; that two mules could be raised at less expense than one horse; is fit for service earlier, and if of sufficient size, will perform as much labor; and if attended to when first put to work, his gait and habits may be formed to suit the owner."

---

* Published in the American Farmer, Vol. VII.

† I noticed in the stables of Dr. John A. Poole of New Brunswick, N. J., while on a visit to him last year, several very superior Jacks. Some were of the Spanish, some Maltese, and some native bred, and all excellent of their kind.

Mr. Pomeroy, who "used them near Boston for 30 years, and to such an extent as to have had more labor performed by them probably than any person in New England," says:—

"I am convinced the small breed of mules will consume less in proportion to the labor they are capable of performing than the larger race, but I shall confine myself to the latter in my comparison, such as stand 14½ to 16 hands, and are capable of performing any work a horse is usually put to. From repeated experiments, I found that three mules of this description, which were constantly at work, consumed about the same quantity of hay, and only *one fourth* the provender which was given to two middling size coach-horses, only moderately worked. I am satisfied a large sized mule will not consume more than three fifths to two thirds the food to keep him in good order, that will be necessary for a horse performing the same labor. The expenses of shoeing a mule the year round, does not exceed one third that of the horse, his hoofs being harder, more horny, and so slow in their growth, that shoes require no removal, and hold on till worn out; and the wear from the lightness of the animal is much less.

"Mules have been lost by feeding on *cut* straw, and corn *meal;* in no other instance have I known disease in them, except by inflammation of the intestines, caused by the grossest exposure to cold and wet, and excessive drinking cold water, after severe labor, and while in a high state of perspiration. It is not improbable a farmer may work the same team of mules for 20 years without having a farrier's bill presented to him.

"In my experience of 30 years, I have never found but one mule inclined to be vicious, and he might have been easily subdued while young. I have always found them truer pullers and quicker travellers, with a load, than horses. Their vision and hearing are much more accurate. I have used them in my family carriage, in a gig, and under the saddle; and have never known one to start or run from any object or noise, a fault in the horse that continually causes the maiming and death of numerous human beings. The mule is more steady in his draught, and less likely to waste his strength than the horse, hence more suitable to work with oxen, and as he walks faster, will habituate them to a faster gait. In plowing among crops, his feet being small and following each other so much more in a line, he seldom treads down the ridges or crops. The facility of instructing him to obey *implicitly* the voice of the driver is astonishing. The best plowed tillage land I ever saw, I have had performed by two mules *tandem*, without lines or driver. The mule is capable of enduring labor in a temperature of heat that would be destructive to a horse. Although a large mule will consume something over one half the food of a horse, yet the saving in shoeing, farrying, and insurance against diseases and accidents, will amount to at least *one half*. In addition, the owner may rely with tolerable certainty on the continuance of his mule capital for 30 years; whereas the horse owner must, at the end of 15 years, look to his crops, his acres, or a bank for the renewal of his.

"The longevity of a mule is so proverbial, that a purchaser seldom inquires his age. Pliny mentions one 80 years old; and Dr. Rees, two in England that reached the age of 70. I saw one performing his labor in a cane-mill in the West Indies, which the owner assured me was 40 years old. I have now a mare-mule 25 years old, that I have had in constant work for 21 years. She has often within a year taken a ton weight in a wagon to Boston, 5 miles, and manifests no diminution of her powers. A neighbor has one 28 years old, which he would not exchange for any horse in the country. One in Maryland, 35 years old, is now as capable of labor as at any former period."

Mr. Hood of Maryland, in the American Farmer, Vol. XII., estimates the annual expense of a horse for 12 months, at $44.00, and that of a mule at $22.00, just half price, and his working age at more than twice that of the horse, and that too after 30 years' experience in keeping both.

A correspondent of the Baltimore Patriot, asserts that "Col. John E. Howard had a pair of mules that worked 30 years, after which they were sold to a carter in the city, and performed hard service for several years longer. Many mules 25 years old, and now in this country, perform well. Many have been at hard work for 12 or 15 years, and would now sell for $100 each. They are not subject to the colt's ailments, the glanders, heaves, yellow water, and colic, like horses; and seldom are afflicted with spavin, ring-bones, or bots, and they will not founder."

Mr. Skinner mentions riding with General Shelby, of Kentucky, after a pair of his mules in harness, eight miles within the hour, without the use of whip. General Shelby says "he has known mules to travel 10 miles within the hour in light harness, and has himself driven a pair 40 miles in six hours, stopping an hour by the way."

Mr. Nathaniel Hart, Jr., of Kentucky, informs me, that he purchased for John F. Preston, Esq., brother of Mr. Senator Preston of South Carolina, four match mules from Major Shelby of Lexington, for $1,000. They were of course very superior animals, and made elegant coach-horses. Mr. Preston has driven these mules 80 miles in a single day without injury; and they proved a first-rate team for many years.

Mr. Ellicott of the Patuxent Furnaces, says: "Out of about 100 mules at the works, we have not lost on an average one in two years. Bleeding at the mouth will cure them of nearly every disease, and by being turned out on pasture, they will recover from almost every accident. I do not recollect we have ever had a wind-broken one. They are scarcely ever defective in the hoof, and though kept shod, it is not as important as with the horse. Their skin is tougher than that of a horse, consequently, they are not as much worried by flies, nor do they suffer so much with the heat of summer."

To the foregoing testimony I may add that of the late Judge Hinckley of Northampton, Massachusetts; a shrewd and close observer through a long life, reaching to 84 years. He bred mules at an early day, and always kept a team of them for his farm work, much preferring them to horses for this purpose, after an experience of 50 years. He had a pair nearly 30 years old, which, in light pasturage in summer, and with a moderate supply of hay and very little grain in winter, and no grooming, performed all the drudgery, though he kept his stable full of horses besides. They outlived several successive generations of horses, and though the latter were often sick and out of condition, the mules never were. This pair once took two of us in a *fancy drive* of some 40 miles, which they easily performed in half a day, although attached to a heavy, clumsy vehicle. One from the stock of Judge Hinckley, 45 years old, was sold for the same price paid for a lot of young mules, he being at that mature age, perfectly able to perform his full share of labor.

For the caravans that pass over the almost inaccessible ranges which form the continuation of the Rocky mountains, and the extensive arid plains that lie between and west of them, on the route from Sante Fe to California, mules are the only beasts of burden used in these exhausting and perilous adventures. Their value may be estimated from the comparative prices of mules and horses; for while a good horse may be bought for $10 to $20, a good mule is worth $50 to $75. My friend, Dr. J. H. Lyman, who recently passed through those regions, informs me that their caravan left Santa Fe with about 150 mules, 15 or 20 horses, all beasts of burden, and two choice blood horses, belonging to an English gentleman, which were led and treated with peculiar care. On the route, all the working-horses died from exhaustion and suffering; the two bloods that had been so carefully attended, but just survived; yet of the whole lot of mules, but 8 or 10 gave out. When thirst compelled them to resort for successive days to the saline waters, which are the only ones furnished by those dry and sterile plains, the horses were at once severely, and not unfrequently, fatally affected; while the mules, though suffering greatly from the change, yet seldom were so much injured as to require any remission of their labor.

The mules sent to the Mexican possessions from our western states, Arkansas, Missouri, Tennessee, and Kentucky, are considered of much more value than such as are bred from the native (usually wild) mares. The difference probably arises, in part, from the Mexicans using inferior jacks to those so highly improved of late years by our western citizens.

Mare mules are estimated in those regions at one third more than horse mules. The reason assigned for this is, that after a day's journey of excessive fatigue, there is a large quantity of blood secreted in the bladder, which the female, owing to her larger passage, voids at once and without much apparent suffering, while the male does not get rid of it, frequently, till after an hour of considerable pain. The effect of this difference is seen in the loss of flesh and strength in the male to an extent far beyond that of the female. Dr. L. says the universal method of reducing refractory mules in the northern Mexican possessions, is for the person to grasp them firmly by the ears, while another whips them severely on the fore-legs and belly. He says a mule 36 years of age was as hardy, strong, enduring, and performed as hard labor, as any one in the caravan.

To sum up the advantages of working mules over horses, we shall have as advantage:—

1. They are more easily, surely, and cheaply raised.

2. They are kept, after commencing work, for about half the cost of keeping horses.

3. They are not subject to many of the diseases of the horse, and to others, only in a mitigated degree, and even these are easily cured in the mule.

4. They attain an age twice as great, and his average working age is probably three times that of the horse.

Let us see what the annual saving would be by substituting mules for three fourths of the horses now used in the United States; one fourth supposed to be required for the purposes of breed, fancy horses, &c., &c.

In 1840, there were reported to be 4,335,669 horses and mules in the Union, no discrimination having been made between them. Suppose the total number at the present time is 4,650,000, and that of these 650,000 are mules, we shall then have 3,000,000 horses, whose places may be equally well supplied by the same number of mules. We have seen that Mr. Hood of Maryland estimates the expense of a working horse at $44 per annum, (not an over estimate for the Atlantic states,) while that of mules is $22. The difference is $22, which it is proper to reduce to meet the much lower rate of keeping at the west. If we put the difference at $10, we shall find the saving in the keep, shoeing, farriery, &c., by substituting mules for the 3,000,000 horses that can be dispensed with, will be $30,000,000 per annum. But this is not all. The working age of the horse will not exceed an average of eight years, while that of the mule is probably over 24. To the difference of keep then, must be added the annual waste of the capital invested in the animal. A mule is more cheaply raised to working age than a horse, but allowing them to cost equally, we shall have the horse exhausting one eighth or three twenty-fourths of his capital annually for his decay, when the mule is using up but one twenty-fourth; and if we allow $48 as the first cost of both animals, we shall find the horse wasting $6 annually for this item, while the mule deteriorates but $2, making an additional item of $12,000,000 more; and an aggregate of $42,000,000 as the annual saving to the United States by substituting good mules for three fourths of the horses now used in this country. When will our farmers have the good sense to make this change? It may be fairly answered, when they shall prefer utility, and interest, and a just taste, to a diseased fancy; for though we admit the superiority in appearance of the race of horses over mules, we deny that a bad horse looks better or even as well as a good mule; and with the same keep and attention, a good mule will outwork and outlook any horse of any breed.

We shall not here go into the estimate of the value of oxen as compared either with horses or mules, but content ourselves with saying, that the strictest economy requires that a spirited, intelligent, vigorous, muscular animal, like the pure north Devon, or Hereford, or native New England ox, ought to be substituted for both the mule and horse, wherever the latitude and labor will admit of their employment to advantage.

R. L. Allen.

Buffalo, December 13*th*, 1843.

GRAMA, OR BUFFALO-GRASS.

This article is the first of a series which is promised us by a friend of ours, Dr. Lyman of Massachusetts, who has recently returned from a three years' tour among the Rocky mountains, the northwest coast, California, parts of South America, and the Sandwich islands. They will be descriptive, mainly, of such products as may be introduced with advantage into our country. We wish the numerous intelligent travellers from the United States abroad, were more often in the habit of chronicling their observations on the agricultural products of foreign countries for the benefit of their countrymen. In consequence of its growing up so thick and fine, we think the buffalo-grass peculiarly adapted for lawns and ornamental grounds, in addition to its great value as a pasture for sheep and other animals.

I noticed page 234 of the last volume of your paper, an account of a grass seen on the western prairies, by Captain Cook of the United States Dragoons. The description he gives of it is entirely correct, with the exception of the name which he has given to it. He has accurately described a grass which is familiar to all who have visited a portion of that vast extent of country lying between our western frontiers and the coast of California, but recognised as the "grama," to which Captain Cook applies the name of "buffalo-grass." It is to be met with in any quantity only between the 96° west longitude, meridian of Greenwich, and the eastern edge of the Rocky mountains.

The name of *grama* was given to the grass of which Captain Cook has furnished a description, by the early Spaniards or new Mexicans. It is probably derived from the Latin *gramen*, and applied by the first settlers of New Mexico to this grass, from the fact of its being the *grass of grasses*, a vegetable containing, in a small compass, all of the most highly azotized principles subservient to animal assimilation. It is not found in as great abundance as some other grasses, such as the *river-bottom grass*, which, in appearance, is like the early green swamp grass, but more tender and nutritious, and the leaves never serrated. The river-bottom grass is also, in appearance, similar to the rank prairie-grass, except in luxuriance, never exceeding twelve or eighteen inches in height; whereas, the prairie-grass, about the western frontiers, grows to the height of three, and even four feet. Both of these grasses seem to afford but few temptations to the grazing animal, and are only eaten by them when impelled by hunger or deficiency of other food, even in the spring, when young and fresh. Animals, however hungry and travel-worn, will take no notice of it, but search diligently and greedily for the grama or buffalo grasses, as soon as they discover their presence. The two latter grasses are seldom found in the same soil with the first, but occasionally I have seen them, and observed with interest animals picking out with care the scattering blades which they discover, shooting up among rich clusters of bottom-grass, which would seem sufficiently tempting to a tired, hungry animal.

Prairie and river-bottom grasses are only to be found in rich moist soil; whereas, both buffalo and grama grasses are only met with in abundance and perfection in hard, dry, and gravelly soil, on side hills and the elevation of undulating prairies and valleys. In fact, hunters and trappers, and others who roam over our great western wilds, think themselves fortunate in finding water, particularly running streams, in the vicinity of these grasses; for there they usually remain a few days to recruit their exhausted animals, and procure their supplies of wild meat, which, in the vicinity of these, never fails; proving, satisfactorily, the vast superiority of these grasses over others, the conduct of both domestic and wild graminivorous animals, influenced by their native instinct in the preference, vouching indubitably for this superiority.

The principal source of nutrition in the "buffalo" (grama) grass, is correctly attributed by Captain Cook to reside in the seeds; whereas, that of the true buffalo-grass exists in the whole plant. This latter grass ripens much later than the grama, and its seeds are retained in the plant far less tenaciously. In fact, they are held by so slight a grasp, that the plant is entirely divested of them, almost immediately upon ripening; whereas, the grama retains its seeds until winter. Even late in January, upon scraping away the snow, laying bare the grass for my animals to graze, I have found the grama bent flat upon the ground, but still retaining many of the seeds, which I have shelled out with my fingers.

I have met with the buffalo-grass in quantities, only between about the 96th degree of west longitude, and the eastern border of the Rocky mountains. I do not recollect ever to have seen any within the mountains during the twelve months I was there, nor in a long and circuitous journey to the shores of the Pacific. After leaving the western frontier of the United States, the character of the country and soil is exceedingly fertile. The vast undulating prairies are very generally covered with the high, luxuriant prairie-grass, and along the borders of many of the creeks, are found, in the greatest abundance, the wild pea, wild cherry and plum-trees, affording food to endless flocks of wild turkeys and prairie-hens, the latter bird, but very little inferior in size to the domestic fowl. Approaching the vicinity of the 96th degree of longitude, the traveller finds himself on the extreme borders of the "buffalo country." Here the character of the soil begins to change from the rich, moist loam, to hard, dry, gravelly land. Here terminates the prairie-grass, and in its place appears the buffalo-grass, so named, perhaps, from the fact of the buffalo very rarely being found east of it. Instead of rising in rank luxuriance like the prairie-grass, impeding the traveller in his march, it seldom is found elevated more than three inches, is thickly spread about, scarcely showing any bare spots of ground. In a word, where it is abundant, it forms a beautiful soft carpet, upon which the traveller treads with satisfaction and ease, and finds at night both himself and animals far less wearied than when plodding through the high grass in the early part of his journey. This grass sends up its leaves from a fasiculated bundle or union of its numerous delicate, spreading, fibrous roots at the very surface of the ground, which fasiculus is about one quarter of an inch long, and from which is sent out, without the medium of any stalk, from eight to a dozen long, slender, tapering leaves, which are four or five inches in length, but which rise to an elevation of about three inches only, and then gracefully bend over to the ground. About one inch from the ground the leaves commence curling in a lateral direction to the tips, which are curved in the form of a ring, nearly touching the ground. From the main root or fasiculus is sent up a short delicate seed-stalk.

My reasons for asserting that Captain Cook is mistaken in his application of the term "buffalo" to the grama-grass, are, that I have been informed by very many trappers and New Mexicans of the names and distinctive characters of each, and that in no instance, have I ever heard, during the experience of nearly two years, the name of *buffalo-grass* applied to the *grama*, but on the contrary, have repeatedly had them pointed out to me by the above distinguishing names. By the Mexicans one is called "la grama," and the other "la yerba de cibolo," (buffalo-grass.)

The grama is very abundant in the western valleys of the Rocky mountains, and about the sources and main branches of the river Bravo del Norte, and Colorado of the west, and at intervals in the intervening country between those rivers and the mountains of California, where it is also very abundant.

These grasses might be introduced into the United States with great advantage. The buffalo grass being well adapted to the fattening of animals, and the grama for strengthening the horse, the ox, &c.

J. H. Lyman.

EXPERIMENTS WITH GUANO.

We are permitted by Mr. Wakeman, Secretary of the American Institute, to make the following extracts from an address delivered October last before this body, by J. E. Teschemacher, Esq., of Boston, Massachusetts.

In an address which I had the honor of delivering before the Massachusetts Horticultural Society last year, I detailed a few experiments made by myself with the new manure from the coast of Peru, called guano, which is unquestionably the dung of sea-birds that has accumulated there in almost incredible masses, and which, owing to its never having been washed by rain, not only retains for ages its wonderful fertilizing power, but possibly possesses them in a concentrated state.

I think this is a fit opportunity to give the results of a continuation of some of these and other experiments, premising that every operation has been carried on by my own hands. But I would previously remark, that about four or five years ago, two cargoes of this manure were imported into England; the following season this number was increased to six, and in twelve months, of 1842, and '43, this importation has increased to above 40,000 tons, and that the sales in London alone since last January, have been from 250 to 500 tons weekly; those in Liverpool probably exceeding this amount. I should be quite willing to rest my belief of its immense importance to agriculture on these facts alone, even if I had not my own experience to confirm it, although I am aware that several experiments have been made which have failed. In all those which I have heard of, the failure could always be traced to some error in its application; some had applied too much, for it is extremely powerful, and had killed their plants—others applied it in ground already highly manured, its effects were of course scarcely visible; others had applied it on dry soil at a dry season, when of course there were no means of its reaching the roots in a proper state. In Peru it is always applied just previous to irrigation, for it never rains on that coast.

On the 12th of May, this year, I sowed several hills of sweet-corn on a poor, exhausted, sandy soil, putting a tablespoonful of guano to each hill of 5 seeds, without any other manure. I feel sure that this quantity in sowing is two thirds too much, one teaspoonful would suffice, besides which it was not sufficiently stirred up with the soil, so that when the young tender sprouts first germinated, they came at once into contact with this most powerful manure, and were considerably injured, turning yellow, and several dying away. Three or four, however, in each hill survived and soon began to grow, of a dark green color. For the first three weeks I did not observe much difference between these and some adjacent hills in the same soil, which I had sown also without manure, for the purpose of comparison. When about one foot high, I stirred into each hill about three teaspoonfuls more guano, and watered all freely as the weather was very dry. On the 11th of July the tassels appeared, which is about a fortnight earlier than usual. When fit for gathering for the table, I exhibited at the rooms of the Massachusetts Horticultural Society, the largest produce of one seed. It had three principal stems, two of which had three heads each, and one two heads, in all eight heads, besides five suckers, each of which showed the silk. The weight of this plant, the roots being cut off, was 8¼ lbs. At the same time I exhibited the best produce of one seed out of the hills without guano or manure. One stalk showed one head, no sucker, and weighed 1¼ lbs. It is well known by cultivators of this corn, that under the usual cultivation it seldom averages two heads to a seed. In my address before mentioned, the view I took of the action of this manure, and which I beg leave to state that I deduced theoretically, from a consideration of the analysis of its contents, was that it would be more valuable in agriculture than in horticulture, for that it was probable that it would diminish the size of the flower, but that it would certainly increase the produce of seed. I consider the above experiment with sweet-corn alone as considerably fortifying these views, and I will mention but one other of my numerous experiments; it is purely a horticultural one, but it further supports the same theory, which is very important to agriculture.

In February, 1842, I repotted two plants, an old woody one, and a young cutting of heliotrope, which were in soil entirely exhausted, and in which they had been about 12 months. The exhaustion of the soil was proved by the leaves turning yellow and dropping off as fast as they appeared, as well as by the attenuated appearance of the shoots. On repotting, I merely added a teaspoonful of guano to the same soil, and replaced the plants in the same pots. In three months they had both shot out most luxuriant branches, with many clusters of flowers; and on the older and more woody plant, each cluster produced a good crop of seed, which this plant seldom produces, even under good common cultivation. This seed and luxuriance may therefore be fairly attributed to the guano. In order to pursue this subject to its farthest limits, I considered it valuable to discover whether any of the ingredients, discovered by chemical analysis of this manure, had found their way permanently into the seed of the sweet-corn, with a view of ascertaining its importance in cultivation as an improver of the food either for cattle or man. I therefore forwarded a portion of the seed grown with guano to Mr. A. A. Hayes of Roxbury, to whose valuable discoveries and researches on this subject I have before alluded, and likewise to Dr. C. T. Jackson, who has also interested himself much in these matters.

Dr. Jackson I have not yet heard from, but the result of Mr. Hayes's experiments on the corn I transmitted to him, is, that the phosphates in the guanoed corn, are to those in the corn without guano, as 6 to 4; in other words, the guanoed corn contains 50 per cent. more phosphates than the other. Now according to the most recent physiological discoveries, it is agreed that without the phosphates, neither flesh nor blood can be formed, and therefore, that the value of food for cattle and man, is dependant on the quantity of phosphates it contains.

The facts may therefore be stated as follows: In a poor soil, with guano at the expense of about $3 per acre, a crop of Indian corn may be raised at least double in quantity to that raised on well-manured land; and this double quantity will contain 50 per cent. more of those ingredients, (phosphates,) which are absolutely necessary to the formation of flesh and blood, than the other.

I myself have repeated Mr. Hayes's experiments with this corn, although I have not been able to separate the ingredients in the seed, so as to make a delicate and certain comparison with those of seeds grown without guano. Yet, according to the judgment of my eye, there is certainly an increase in the phosphates of the seed with guano. If this fact can be fairly once ascertained with one ingredient, it may be fairly supposed to be the case with others; and when the researches affecting agriculture, now being pursued by numerous able men of science, shall have attained a greater degree of precision and perfection, the importance of a knowledge of the ingredients contained in the various foods of cattle and man, will become quite manifest.

One other consideration has suggested itself to me as worthy of notice. In cultivation, the choice of fine seeds has always been deemed of first-rate consequence. If the seed of this first year's sowing with guano has really acquired any more valuable properties than that cultivated without, it is at least probable, from what we already know practically of the laws of vegetation, that these properties may be increased with another year's similar treatment; I have therefore preserved some of this guanoed corn as seed for the succeeding year, when it will be again tried with the same manure.

It is much to be regretted that an import duty of 20 per cent. ad valorem is levied on guano. This has just been paid on a small quantity imported into Boston, a good portion of which has, by the liberality of Capt. John Percival of the U S. Navy, been distributed among the members of the Massachusetts Horticultural Society; no doubt, however, that on proper representation being made at Washington, an article of so much importance to agriculture, will be admitted free.

I will merely add to these statements, that the quantity of guano I consider desirable for each hill of corn of 5 seeds, is less than one ounce to be given in two applications. One quarter on sowing must be well mixed with the soil, and three quarters stirred well into the hill when the plant is about a foot high, always endeavoring to effect this latter operation just previous to rain. This would give about 70 lbs. to the acre, supposing it to contain 1,100 hills at six feet apart. The price in England, is £10 to £12, or $50 to $60 per ton of 2,240 lbs.; hence the quantity to the acre would cost somewhat less than two dollars and no other manure is necessary. In England it has been applied at the rate of 250 to 500 lbs. to the acre, or more than six times the quantity by the above calculation; but there it is scattered broadcast as the seed is sown, and of course the quantity used must be much greater, as all the ground is covered. In the method I propose it is applied as it were simply to each plant. In England nothing is cultivated in hills, it is either broad-cast or in drills.

There is unquestionably much still to learn on this subject: I am sure I do not pretend to have more than raised the skin of the scientific part of it; but of the great value of guano on poor and sandy soils under proper application, there can not exist a doubt.

A remark has been made by some even of high authority in these matters, to the effect that having stimulated vegetation highly by these powerful manures, should the application not be continued, the soil would become exhausted and barren. Now is this not true of any manure, of the best-cultivated field in the world? Must not the farmer always use manure, and does he not exert himself to make it as powerful as possible? There is no strength in this objection. The results of many careful experiments made in England on various crops, have been published. They are quite decisive in favor of guano, even compared with nitrate of soda, and other powerful fertilizers. Another manure I read of, as much in favor there, is Potter's artificial guano, composed chiefly of the same ingredients as chemical analysis has shown to be contained in the South American guano. Therefore, should the cheap natural source in Peru fail, science has shown how its place can be supplied, although I fear at rather a more costly rate.

THE PULVERIZER.

I have lately seen an implement invented this year by Mr. Isaac Clapp of Dorchester, Mass., which he calls properly a pulverizer. It is certainly an implement of much merit, and has given great satisfaction at the meetings where it has been exhibited, as well as to individuals who have seen it operate, and in whose judgment I have the highest confidence. It is a roller loaded as heavily as is judged proper; behind this is a moveable frame of a simple construction, managed with the hand, by means of two handles. This frame is armed below with a number of strong knives, about four or five inches long. As the roller passes along, the knives are pressed into the soil by the hand, the roots and clods are cut to pieces, and the earth is as beautifully pulverized as if it had been done by spade-husbandry. In case of meeting with stones, or other impediments, the frame is lifted up and passes over without trouble.

I do not mention this machine for the purpose of puffing it into notice, for it is of so simple a construction, that Mr. Clapp has no idea of reaping any benefit from it; but since I began writing this address, I have heard of its very satisfactory action at a meeting near Worcester, and while listening to the account, an idea struck me, which, as I have not seen Mr. Clapp, I have not communicated to him; it is, that it would be a most excellent machine for incorporating into the soil guano, lime, nitrate of soda, or any other of these manures which are spread broad-cast over the surface, and need some implement to put them slightly under the soil until wanted by the crop, that their virtues may not be wasted in the desert air.

J. E. Teschemacher.

AGRICULTURE OF NORTH ALABAMA.

Description.—The only part of North Alabama worth notice, as a planting or farming region, is the valley of the Tennessee river. It embraces six counties, north and south of the river. Latitude 34° 40′—150 miles long, by 40 or 50 broad. The face of the country is level, the soil good. The forest is composed principally of post-oak, red-oak, black-jack, and hickory. The surface soil is a dark vegetable mould, from three to six inches deep; the sub-soil is a deep red clay—yet productive when exposed to the sun and air. It dries quickly, is not very adhesive, and plows kindly, in all reasonable weather. About one eighth of the soil is sand, which accounts for its easy culture. It is as susceptible of fertilization as any soil I know, yet no attention is paid to manuring. The horse-stables and lots are frequently not cleaned out for five years; and not unfrequently large heaps of cotton seed, (the best of manures,) accumulate about the gin-house, and there remain, without being applied to fertilize the land.

Size of Farms.—The country is divided into farms, from 100 to 3,000 acres, generally squares, or parallelograms. The most common size is 800 to 900 acres. The force engaged varies with the farms, from 5 to 100 hands. The most efficient force for its size, is 25 to 30 hands. The number of souls on a farm is about double the number of hands.

Products.—Cotton is the staple, or article of export; corn, wheat, oats, rye, and potatoes, are raised for consumption, and comprise the entire crop. The crop per hand, is 8 acres of cotton, 6 of corn, and 3 of small grain. The average product per acre, is 150 to 200 lbs. bale-cotton, or 600 to 800 lbs. seed-cotton; 25 to 30 bushels of corn, or maize; and 12 to 15 bushels of wheat, rye, or oats.

Mode and Time of Planting Crops.—Wheat is sown in October, on corn or cotton-stubble, and plowed in with single plows. Oats are sown in February, and managed in the same way. Corn is planted in March, by throwing two furrows together 5 feet apart, check across, at 3½ feet, drop and cover with a hoe or block. Corn is plowed twice each way, four to five furrows at a time, and thinned to two plants in a place. Stock-peas are planted the third plowing, in the middle of the wide rows; the culture of this crop stops in June, at which time we harvest wheat and oats. Cotton is planted in April, by running off the land 3½ feet, throw two furrows each way with a turning-plow, which forms a ridge, open this with a coulter plow, very shallow, drill in the seed at the rate of three to five bushels per acre, and cover with a block, or billet of wood two feet long, eight inches in diameter, and notched so as to fit the ridge. On the after-culture of this crop we all *differ;* no two work alike. Generally, the plants are thinned to one foot in the drill, hoed five or six times, plowed as often, but very shallow. We lay by this crop 15th July. The remainder of this month is occupied in fixing about the farm. August, we strip the blades from the corn, and stack it for the team. No attention is paid to the grasses, except, in a few small lots, occasionally a field of red-clover, which does well. September, we commence picking cotton, and continue, when the weather is favorable, till it is out, if it takes till April.

Stock.—The working-team of a farm is made up of mules, horses, and oxen. Mules are preferred. Every farmer attempts to raise his own team. Thirty to forty acres are allowed for one horse or mule to cultivate; though there are one third more animals kept about the farm, than the number employed. All raise sheep enough to supply the family with wool and mutton. No attention is given to the sheep, they shift about the farm, without any feeding. All raise pork enough for their own use, and occasionally some to sell. We are as great pork-consumers as any on the globe, for our number. From 200 to 250 lbs. per head, for all the souls on a farm, is allowed. More attention is paid to hogs, than any other branch of stock, they are raised principally on corn, aided by peas, oats, and clover. We have of all the improved breeds of swine. I have a pair of Berkshires, from John Mahard, Jr., of Cincinnati, Ohio. I have bred from them two years, and consider them the cheapest and best stock I have seen. For the last two seasons I have fattened my hogs with one third less grain, and have larger animals than before I obtained Berkshires.

Domestic Fabrics.—Most all of our farmers manufacture the apparel of their domestics and laborers. We use Pearse's spinning machine, made at Cincinnati, Ohio, with six spindles, and the common loom. We have two infant cotton factories in the valley. They run from 8,000 to 10,000 spindles, and about 75 looms. Their profits are considered greater than any other branch of business in the valley.

Prices of Products.—I add the home prices of agricultural products. Cotton, 6 to 6½ cents per lb.; Bagging, 15 to 16 cents per yard; Rope, 6 to 7 cents per lb.; Corn, 20 to 25 cents per bushel; Oats, 37½ cents; Wheat, 62 to 75 cents; Pork, $2,75 to $3,00 per 100 lbs., in demand; Mules $50 to $75; grown Cattle, $4, to $10 per head; Sheep, $1, to $1,25. Frequently there is no demand for any of the above articles—all sellers and no buyers.

G. L. Cockrill.

Tuscumbia, Ala., Nov. 30th, 1843.

We are much obliged by Mr. C.'s account of North Alabama, for it is a land little known to us. It shows quite a happy state of things, and we hope he will continue to favor us with other notices of its agriculture. We should like to learn more particularly about grasses—how they flourish during the heat of summer? whether they have any improved animals there other than swine? what kinds of fruit are cultivated? and how our northern fruits, such as apples, pears, plums, cherries, &c., produce?

The ear of corn about which Mr. C. inquires in his P. S., had 21 rows, *exactly*—neither more nor less; for we counted them twice, thinking we were mistaken the first time. It was also a subject of remark among several of our friends. But why "anomalous"? If we recollect right, we have seen ears of corn in the valley of the Miami, showing from 18 to 24 rows each; though we can not positively vouch as to the fact. Will some of our Ohio correspondents say whether we are correct in our recollections or not?

The Polotokian, or Artificial Chicken-Hatcher.—We understand this curious establishment for hatching and rearing chickens by artificial heat, is at length in successful operation. It is situated in the suburbs of Brooklyn; but as the proprietors have not yet perfected their operations, they decline admitting any one to see it. We are informed that they claim some new discoveries or improvements over those used in England, and as soon as these are complete, we hope to be allowed the privilege of inspecting the premises, and giving the public some account of it.

NORTHERN CALENDAR FOR JANUARY.

The following brief hints to the farmer, planter, and gardener, will be found to apply not only to the months under which they are arranged, but owing to diversity of seasons, climate, and soils, they may frequently answer for other months. This precaution the considerate agriculturist will not fail to notice and apply in all cases where his judgment and experience may dictate.

This is the season, when, throughout all the northern states, the out-door work connected with the soil is totally suspended. But luckily for the pleasure of the farmer, as well as his profit, there are many things requiring his attention equally with the duties of every season, and some of which may be much better done than at any other time. The first and most important thing that demands his attention, is the care of the stock. All his cattle, horses, and swine, should be housed at night and during storms, and the sheep, though usually considered a more hardy animal, and better adapted to exposure and inclemency, will yield more wool, and consume less hay, and be less subject to disease, if furnished with snug shelter at night, and during the coldest weather. They require a free ventilation of their sheds, which all stables should also have. But this does not imply that they should be so open to the rude winds, that a good-sized calf can jump through the sides of the buildings anywhere. They may be close and warm, but not filthy, damp, and unwholesome; on the contrary, they should be kept clean and at all times well aired. If fodder is short with you, be the more economical with it, not by starving your cattle, but by taking more care that none of it be wasted. There is great saving in cutting fodder, which should always be done when the price of labor is not too high in proportion to its value. Where this is practised, cattle eat all the hay clean; and straw and corn-stalks, when cut up fine, with the addition of some light grain or roots, will keep stock well through the winter, if properly housed. Sheep should never be suffered to run under the hay-mow or stack, as the seeds and parts of the hay sift into the wool, and diminish its value materially. Water should, if possible, be supplied in the farm-yard, and wherever practicable, from a living spring, or running stream. This gives fresh, sweet water, and by having a supply always at hand, animals never drink to excess or overload their stomachs with cold water, which often produces cramp or colic. If the sledding is good, or the ground well frozen, all the transportation for the year that can possibly be done, should be attended to. All the wood required for the year may now be drawn. This ought to have been cut in the preceding autumn or summer, as it is more solid and durable cut at that time, and it has moreover an opportunity to get well dried. The logs should be drawn to the saw-mill, by which a supply of boards and timber can be in readiness for future use. All the products remaining on hand should be taken to market, if the prices are favorable. Heaps of manure may be removed to the fields where wanted. Peat and swamp muck, if before thrown into heaps and drained, may be sledded home, or into the fields where they are to be used. If manure can be had of any one unwise enough to part with it, let it now be drawn home and stored, and not allowed to ferment unless well covered with earth and gypsum, to absorb the gases that would otherwise escape. During the winter months, all the tools should be put in order, and any old difficulties remedied, and new improvements added to them. The children should all be at school, and their studies well looked after. Their head-work in winter, is of more consequence than their hand-work in summer; and you can not expect to make good or efficient men and women out of ignoramuses. Let the grown folks look well to the manner of spending their own long winters evenings. Especially, see to it, that you carefully look over your agricultural books and periodicals, read attentively all they contain relative to your own business, and note carefully how far your own experience corresponds with, or differs from the information there detailed. If you have any valuable facts to add to the general stock of knowledge, prepare and send them for publication, as a partial return for the advantage you have received from others on similar subjects.

Improve all the clear frosty weather this month to break out hemp. Have a care of the tobacco, and if the weather be open, continue plowing.

KITCHEN GARDEN.—Hot beds should now be made by those desirous of having very early vegetables. This may be done with a layer of horse manure two feet deep, well settled together, over which place a few inches of garden mould, intermixed with sand, unless there is enough in the soil. Around this is placed a frame to keep the manure and soil in their place, and over it glass frames inclining about 25° toward the south. The seeds of all such vegetables as are required for early use, may then be sown, such as cabbages, cauliflowers, radishes, lettuce, tomatoes, &c. The surface should be kept sufficiently moist, and during the middle of the day in very warm weather, the glass may be withdrawn so as to let the sun in upon the plants. As much air should be admitted as can safely be done without injury to the plant from reducing the temperature too greatly, as the growing vegetables soon change the air and render it unfit for nutrition. A great many little comforts may be procured by some attention to a hot bed; and if you live near a market, enough may be sold from your early vegetables to remunerate you for all trouble and expense thrice over. If the ground is frozen, continue preparing for spring, as directed in December.

FRUIT GARDEN AND ORCHARD.—Examine your orchards and cut off all dead limbs close to their trunks or branches; scrape off the moss, &c. General pruning should be left until summer.

FLOWER GARDEN & PLEASURE GROUNDS.—The directions of December will also apply to this month. At your leisure hours prepare labels for flowers next season, and get everything in order for the work in the spring.

SOUTHERN CALENDAR FOR JANUARY.

As a great portion of the directions given in the Northern Calendar, for each month in the year, will apply to the South, it is not deemed necessary to recapitulate them. Most of the operations which relate to the tilling of the earth; the raising of garden vegetable or fruits; the cultivation of flowers, herbaceous plants, or shrubs; the laying out of ornamental grounds or plantations; the preparation of composts or manures, and the rearing and management of stocks or animals, will be nearly the same in both sections of the country. The chief differences consist in the seasons in which these operations are performed, and the cultivation of cotton, rice, sugar-cane, hemp, and tobacco. The spring and harvest seasons of the South are generally in advance of those of the North by two or three months.

Let it be remembered that the florist, the gardener, and the agriculturist, have no remission from labor; for there is something to be done in every week in the year —something to attend to which will add to wealth, amuse and instruct the mind, interest the imagination, and benefit the general tone of mental and physical health.

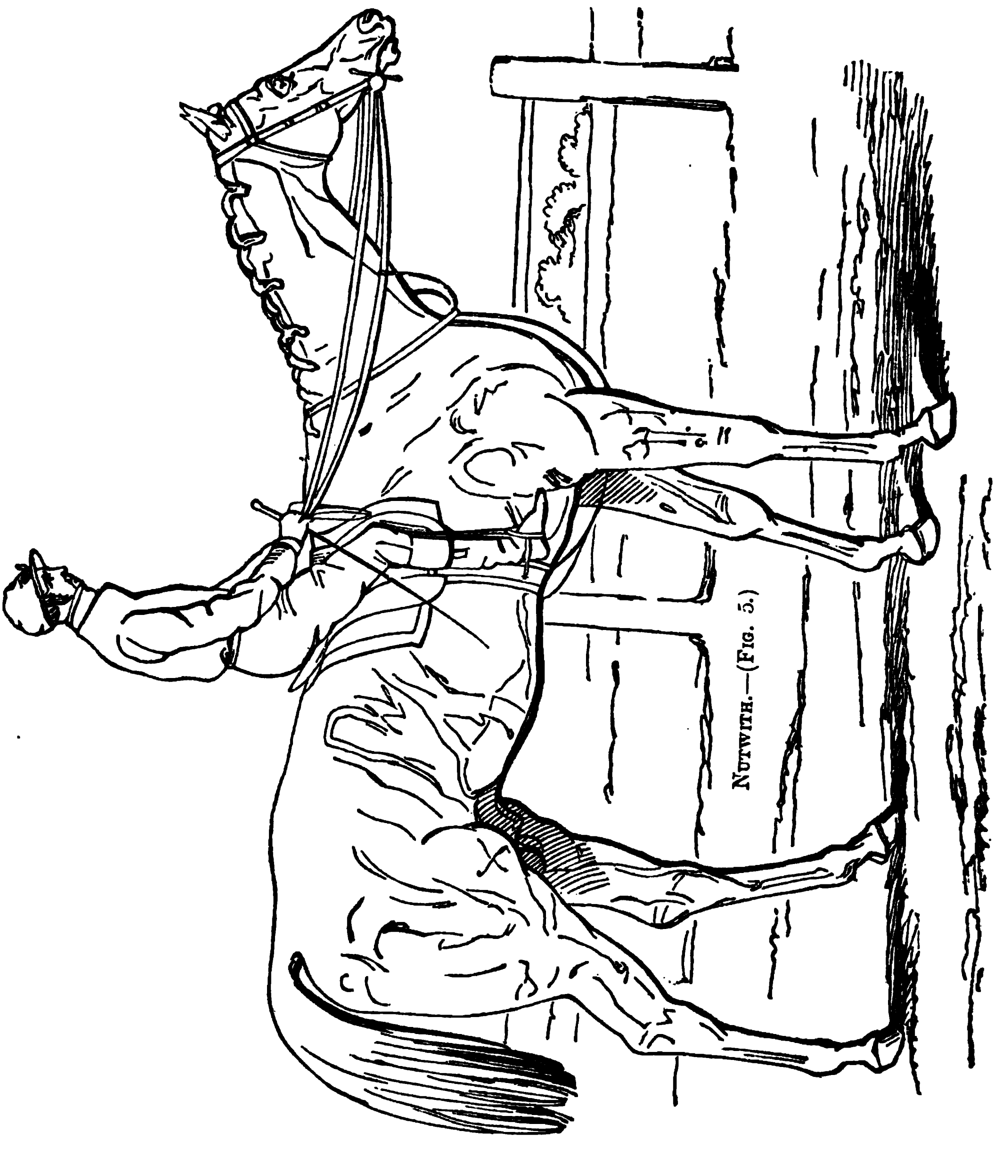
"Persevere against discouragement—keep your temper—employ leisure in study, and always have some work on hand—be punctual and methodical in business, and never procrastinate—never be in a hurry—preserve self-possession, and not be talked into conviction—rise early and be an economist of the time—maintain dignity without the appearance of pride—manner is something with everybody, and everything with some—be guarded in discourse, attentive and slow to speak—never acquiesce in immoral or pernicious opinions—be not forward to assign reasons to those who have no right to ask—think nothing in conduct unimportant and indifferent—rather set than follow example—practise strict temperance, and in all your transactions remember the final account."

In the early part of this month, if it has not been done in December, select a spot of ground, prepare the necessary beds, and sow your tobacco seed. Make the beds, if possible, on land newly cleared, or at all events on land which has not been seeded with grass. Break up the ground properly, grub up the small stumps, dig out the roots, and carefully remove them with the hand. Make the beds from three to four inches high, of a reasonable length, and from three to three and a half feet broad, so as to enable the fingers, at arm's length, to weed out the tender plants from both sides of the bed. Before the seed is sown, take some dry trash, and burn it off upon the beds, to destroy insects and grass-seeds. Take one ounce of tobacco-seed, mix it with a quart of dry ashes, so as to separate it as much as possible, and sow it broadcast. After it has been thus sown, slightly rake the surface, tread it down with your whole weight, that the ground may at once closely adhere to the seed, and sprinkle with rain or river water. Should the beds become dry, from blighting winds or other causes, watering should be constantly repeated until the young plants are large enough to set out. Keep the surface of the beds in a moist state, well stirred, and the plants clear of weeds.

Finish planting sugar-cane, if the season requires it, covering the canes to the depth of about three inches. Do not grind the cane any faster than it matures, for the sake of finishing your harvest. When the cuticle of the cane becomes dry, smooth, and brittle, the pith grayish approaching to brown, the juice sweet and glutinous, and when cut crosswise with a sharp knife without appearing soft and moist like a turnep, then it is in a fit state to cut.

Plant all kinds of ever-greens, either from slip or roots. Sow peas and beans, summer cabbage, and parsley. Sow spinach for seed in a bed of rich mould. Set out your artichokes, which will bear in the fall. Transplant rose-bushes, all kinds of flowering shrubs, and trees for fruit, and ornament, except the orange tribe, which should not be removed before spring.

See Northern Calendar for March and April.



NUTWITH.—(FIG. 5.)

Nutwith, winner of the St. Leger, 1843, copied from an outline portrait taken expressly for Bell's Life in London, by J. F. Herring. For the above cut, we are indebted to the obliging editor of the New York Spirit of the Times, Wm. T. Porter, Esqr.

Description.—Nutwith stands, according to Robert Johnson's measurement, 15 hands 2½ inches; but has, when mounted, the appearance of a smaller horse. He has a long, straight head; light and rather short neck; strong shoulders, well laid back, and is good in the brisket; unusually large arms, with clean light legs, and long upright pasterns; his back short, his loins arched; well ribbed, as a sailor would say, fore and aft; has long quarters, full muscular gaskins and thighs; small hocks, and rather curby in their appearance; tail well set on. A noble marquis sent his agent to Middleham to see him when a two-year-old, and the latter gave it as his opinion that his hocks were not to be trusted to, or in all probability he would have gone south.

Pedigree.—Nutwith bred by the late Captain Wrather, is by Tomboy, out of a Comus mare bred by Mr. Wrather in 1816, her dam Plumper's dam by Delpini, out of Miss Muston by King Fergus—Espersykes; Hackfall and Colchicum are out of the same mare. He takes his name from Nutwith, near Masham, Yorkshire.

FOREIGN AGRICULTURAL NEWS.

By the arrival of the steamship Hibernia, we have received our European journals up to the 5th December.

Markets.—*Ashes* have receded a trifle, and are dull of sale. *Cotton* of ordinary to fair qualities, has risen ⅛d. per lb., and a good business had been done in it. The import into Liverpool from the first of the year to the first of December, was 1,488,000 bales, against 1,133,000 in the first eleven months of last season,—the supply from the United States was 1,237,000—being an increase of 371,000 bales. The stock in this port 1st inst., was 657,000 bales, against 425,000 at the same period last season; the stock of American was about 450,000, being an increase of 223,000 bales. *Flour* continued in little demand, but old prices fully maintained. *Lead* firm, and none from Missouri on hand. *Naval Stores* in fair demand. *Provisions*. The new *Beef*, which had arrived from the United States, appeared better than any heretofore shipped—not much has been sold as yet—holders firm. *Pork* and *Hams*, in good demand. *Lard* has fallen a trifle, with large sales. *Cheese* of the finer qualities, much sought after—that which is poor, very dull, and difficult to get rid of. *Rice* and *Tobacco* quiet.

Money is rather more in demand, the rates of discount the same as at our last.

American Stocks.—A very considerable increase of business has taken place in these, and the market was quite animated.

Business generally in England wears a favorable aspect, and the people at present tolerably well employed.

Gardeners' Chronicle.—*Errors of Liebig*.—"How different are the evergreen plants, the *oleaginous plants*, the mosses, the ferns, and the pines, from our annual grasses, the ceralia and leguminous vegetables! The former, at every time of the day during winter and summer, obtain carbon through their leaves by absorbing carbonic acid *which is not furnished by the barren soil on which they grow*; water is also absorbed and *retained by their coriaceous or fleshy leaves* with great force. They *lose very little by evaporation* compared with other plants. On the other hand, how very small is the quantity of mineral substances which they withdraw from the soil during their almost constant growth in one year, in comparison with the quantity which one crop of wheat of an equal weight receives in three months!"

Here we have almost as many errors as sentences. There is not a shadow of evidence that what we call evergreens are acted on by soil in a manner different from ordinary plants; or if there be, it is in favor of their requiring a larger amount of carbon in the soil than other plants—witness all those races of evergreens that flourish only in peat. In the next place, to say that mosses receive no carbon from the soil which sustains them, is an assertion in the very teeth of facts; we do not find these plants thriving on white and pure sand, but on the surface of the ground, in bogs, on housetops, and other places where carbon must necessarily abound, as is shown indeed by the dark color of the soil that bears them. Then ferns, we are told, retain water by their coriaceous leaves with great force; which is true of one or two species only. On the contrary, they are plants whose evaporating powers are (as is well known) so great, that they can in general exist only in very damp situations. What oleaginous plants may be, we do not know. As to cereal plants (cer*a*lia, as it is always spelt in this book !)—it is true that they withdraw a large quantity of mineral matter from the soil on which they grow; but we can not comprehend why that circumstance should prove that their functions of respiration are at all different from those of other plants.

Keeping Apples and Pears.—The best mode of keeping apples and pears is to place them in close drawers made of wood that does not contain turpentine; these being in a room so constructed as to resist as much as possible all sudden changes of the weather, and in a cool but dry situation.

To destroy Red Spiders.—We are not aware of any other means of destroying the red spider, than by keeping up a damp, humid atmosphere, or by the application of the fumes of sulphur.

To kill Dock, Couch-Grass, &c., in Lawns or Gardens.—Cut off the tops by mowing, or with any sharp instrument, and while the wounds are fresh, water them with ammoniacal liquor from the gas-works. It is remarkable how soon the whole mass becomes not only dead, but rotten.

Pear-Training superseding the necessity of Root-Pruning.—Going over the pear quarter at the royal gardens at Versailles, I found from the head-gardener that he considered the tying-down the branches a sufficient check to overgrowth, without the assistance of root-pruning, except as regards any very free-growing varieties. Nothing could, to my mind, exceed the neatness and good-bearing of the pear-trees; they were of a conical shape and all the branches tied down so as to present the appearance of a conical chandelier, and of course much more bearing-wood obtained than in the trees which were stunted by root-pruning.

Manure for Melons.—It is contended that hen-dung is equal to pigeon's-dung, in producing a large quantity and fine quality of melons.

Guano Manure for Turneps.—It has been found by experiment, that one cwt. of guano is equal to five yards of farm-yard manure, or six bushels of bones, in raising turneps. Four cwt. per acre of guano is considered good manuring.

Organic Matter in Water.—Prof. Connell has shown that a notable quantity of—apparently nitrogenous—organic matter is present in the purest water from terrestrial sources. May not a part of the benefical effects of irrigation be due to such dissolved organic matter? Even as regards the animal economy, we can not suppose that it will not contribute, in proportion to its amount, to the nourishment of man and other animals partaking of such waters; and this will more particularly be true, if it really be an azotised body.

Mr. J. J. McCaughan.—The London Gardeners' Chronicle of Dec. 2d, copies the article on the Palmetto-Root, which appeared in our 2d vol., page 21, from the valuable communication of our correspondent above.

Liebig's Chemistry.—A third edition of this valuable work is published, which is pronounced far superior to the others. The Chronicle contains an excellent review of it, which we shall copy at length in our next, if we can spare the space for it.

Pawlownia Imperialis—This beautiful tree grows in Japan to the height of 30 feet. In the Garden of Plants in Paris, it has already produced ripe seeds.

Ancient Oaks.—In the court-yard of a modern farmhouse, which stands a league and a half southwest of Saintes, in the department of the lower Charente, grows an oak which is estimated to be from 1,800 to 2,000 years old, and is thought likely to stand some hundred years longer. The diameter at the ground is from 24 to 27 feet; at the height of a man, 18 to 21 feet. The expansion of the branches is from 112 to 120 feet; the height of the tree is 60 feet. A room has been built out of the dead wood, from 9 to 12 feet wide and 9 feet high.—*Annals of the Agricultural Society in Auslande, No.* 142.

We suspect for "diameter" above, we should read *circumference;* for it is very improbable, that any tree in Europe can be 60 feet round its trunk at the height of a man from the ground. There is an oak now standing on the estate of Judge Lawrence, Little Neck Bay, Long Island, five miles from Flushing, which has a spread of branch of 125 feet, which is the greatest diameter we ever saw or heard of in an oak.

GARDENERS' MAGAZINE.—*First introduction of the Ruta-Baga into England.*—The Rev. Thomas Newcome, Rector of Shenley, Hertfordshire, says, that Sir David Kinlock of Gilmerton, near Edinburg, told his father, when Vicar of Gresford, Denbighshire, that a Swedish nobleman gave him the seed.

Ill health of Mr. Loudon.—It pains us to hear that this celebrated author of so many valuable works on agriculture, gardening, and architecture, has been lately seized with an inflammation of the lungs, terminating in chronic bronchitis, which, even if the disease should be considerably alleviated, will effectually prevent him from any longer pursuing his profession, of landscape-gardener. Mr. Loudon fell into ill health in 1821, which obliged him ultimately to have his right arm amputated, his left hand being at the same time so much injured as to leave him with only the partial use of two fingers and his left knee being anchylosed. In consequence of these bodily infirmities, Mr. Loudon has been obliged to keep an amanuensis and a draughtsman for the last twenty years, and also a servant to act as valet; and had it not been for the expenses thus incurred, and others arising from the same source, he might have been now independent, even without his literary property. This explanation is due to those who are ignorant of Mr. Loudon's personal character.

FARMERS' MAGAZINE.—*Multicole Rye.*—It grows on common soil, suited to the old-fashioned rye, but its habits are totally different. By the report of above thirty respectable agriculturists near L'Orient, who have cultivated it for the last two years, it does best when sown the first of June. Its growth is most rapid. Two crops of it are, before July, cut for hay; and, by the 15th of August, a grain crop is reaped. The straw is from eight to ten feet high, and the ear from ten to eighteen inches long. An account of this may be found in the Transactions, published by the French Minister of Agriculture, &c. Would not this variety of spring-rye be worthy of trial in those parts of the country where other grasses are difficult of growth, on soils rather sandy and light, but which, if in good condition, are the best for this grain? The growth, if correctly stated, is truly surprising.

Rev. W. L. Rham.—This celebrated writer and agriculturist, died at his living of Winkfield, in Berkshire, on the 31st October last, in the 64th year of his age. He was an eminent contributor to the Gardeners' Chronicle, and the Journal of the Royal Agricultural Society, and wrote most of those excellent articles on agriculture in the Penny Cyclopedia. He had established a school in his parish, on an excellent plan, uniting practical industry in farm-labor, with the usual routine of instruction. Mr. Rham was born in Switzerland, but descended from a family originally German. Several of his relatives are conspicuous in the mercantile world, particularly in the United States.

Editor's Table.

THE SILK QUESTION SETTLED, by the testimony of One Hundred and Fifty Witnesses. Report of the Proceedings of the National Convention of Silk-Growers and Silk-Manufacturers, held in New York, Oct. 13th and 14th, 1843; published under the direction of the American Institute. Saxton & Miles, 205 Broadway, New York; price 25 cents. This is a very valuable octavo work of 80 pages, double columns, and is the most complete in its information on the culture of silk, of anything yet put before the American public. We bespeak for it an attentive perusal, it being dedicated to those most interested, viz: the farmers of the United States, every one of whom should possess himself of a copy of the above work. The price is made low, that it shall have a large circulation, and we are of opinion that its publication will be the means of giving a new stimulus to the growing and manufacture of silk throughout the country.

QUARTERLY JOURNAL of the Newfoundland Agricultural Society, published by J. T. Burton, Duckworth-street, St. Johns, Newfoundland, 8 pages quarto, price 2*s.* 6*d.* When we found the above work on our table this morning, just after a shower of snow, we rubbed our eyes with no small astonishment, thinking it must have dropped from the clouds—a *printed snow-flake.* Agriculture in Newfoundland! pray what do they raise there, save fat fish from the ocean? Well, gentle reader, as you may be in doubt, we will tell you from the very pages of our snowy brother of the north, themselves. Potatoes, turneps, oats, barley, wheat, hay, grass—Here stops our enumeration, for we have only the 4th number of the work. Will the editor please send us the other 3 numbers, and tell us all about the agriculture of Newfoundland? We would give more to see one single article on arctic products, than all his extracts from foreign works put together, for we confess ourselves most profoundly ignorant of the agriculture of Newfoundland. The next journal we shall expect to hail, will be the QUARTERLY, or MONTHLY NORTH POLE. We fancy if any one ever succeeds in reaching it, and gets into Simms' hole, he will find it an admirable conservatory for growing tropical plants. Why not? Geologists affirm that they grew within the polar circles formerly, why should they not continue to do so? Who knows, experimentally? We have a notion that it is a famous place there for tropical productions, and that fine apples, may be found, as big as a bushel-basket, oranges as large as our hat, and bananas a yard long!

THE PLANTER'S BANNER AND LOUISIANA AGRICULTURIST.—This excellent paper comes to us under a new form, a handsome quarto of 8 pages, weekly, price $4 a year, in advance. It is published in Franklin, La., and edited by Robert Wilson. It gives us great pleasure to see it devote so much of its space to agriculture; and we have been no less entertained than instructed, by the articles which appear on this subject. Its road journal is capital. Will it have the goodness to send us, *marked,* Mr. Packwood's system of rotation of crops on his sugar plantation? We particularly commend the Banner and Agriculturist to the notice of the planters of the south.

THE CONCORDIA INTELLIGENCER.—This spirited paper is published at Vandalia, La., directly opposite Natchez, and is edited with much spirit and ability, by Messrs. Patterson & Thorpe. We especially commend it to southern readers, for the interesting particulars it is continually giving them upon the subject of agriculture.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, DECEMBER 25, 1843.

ASHES, Pots,	per 100 lbs.	$4 50	to	$4 56
Pearls,	do.	5 12	“	5 19
BACON SIDES, Smoked,	per lb.	3½	“	4½
In pickle	do.	3	“	4
BALE ROPE	do.	6	“	9
BARK, Quercitron	per ton	23 00	“	24 00
BARLEY	per bush.	54	“	56
BEANS, White	do.	1 25	“	1 75
BEEF, Mess	per bbl.	6 00	“	7 00
Prime	do.	4 00	“	5 00
Smoked	per lb.	6	“	7
Rounds, in pickle	do.	4	“	5
BEESWAX, Am. Yellow	do.	28	“	30
BOLT ROPE	do.	12	“	13
BRISTLES, American	do.	25	“	65
BUTTER, Table	do.	12	“	15
Shipping	do.	6	“	10
CANDLES, Mould, Tallow	do.	9	“	12
Sperm	do.	31	“	38
Stearic	do.	20	“	25
CHEESE	do.	4	“	7
CIDER BRANDY, Eastern	per gal.	35	“	40
Western	do.	28	“	35
CLOVER SEED	per lb.	9	“	10
COAL, Anthracite	2000 lbs.	5 00	“	6 00
Sidney and Pictou	per chal.	5 75	“	6 25
CORDAGE, American	per lb.	11	“	12
CORN, Northern	per bush.	55	“	57
Southern	do.	52	“	54
COTTON	per lb.	7	“	11
COTTON BAGGING, Amer. hemp	per yard.	16	“	18
American Flax	do.	15	“	16
FEATHERS	per lb.	27	“	31
FLAX, American	do.	8	“	8½
FLAX SEED, rough	per 7 bush.	9 00	“	9 25
clean	do.	10 00	“	— —
FLOUR, Northern and Western	per bbl.	4 56	“	4 75
Fancy	do.	5 25	“	5 50
Southern	per bbl.	4 50	“	4 75
Richmond City Mills	do.	5 50	“	5 62
Rye	do.	3 00	“	3 25
HAMS, Smoked	per lb.	5	“	7
Pickled	do.	4	“	6
HAY	per 100 lbs.	50	“	56
HIDES, Dry Southern	per lb.	9	“	11
HEMP, Russia, clean	per ton.	185 00	“	190 00
American, water-rotted	do.	140 00	“	180 00
do dew-rotted	do.	90 00	“	140 00
HOPS	per lb.	7	“	9
HORNS	per 100	1 25	“	5 00
LARD	per lb.	5½	“	7
LEAD	do.	3½	“	4
Sheet and bar	do.	4	“	4½
MEAL, Corn	per bbl.	2 62	“	2 75
Corn	per hhd.	12 00	“	12 50
MOLASSES, New Orleans	per gal.	23	“	30
MUSTARD, American	per lb.	16	“	31
OATS, Northern	per bush.	32	“	34
Southern	do.	26	“	30
OIL, Linseed, American	per gal.	75	“	80
Castor	do.	80	“	85
Lard	do.	55	“	65
OIL CAKE	per 100 lbs.	1 00	“	— —
PEAS, Field.	per bush.	1 25	“	— —
PITCH	per bbl.	1 12½	“	1 37
PLASTER OF PARIS	per ton.	2 00	“	2 25
Ground, in bbls	per cwt.	50	“	— —
PORK, Mess	per bbl.	10 50	“	11 38
Prime	do.	8 75	“	9 50
RICE	per 100 lbs.	2 37	“	3 00
ROSIN	per bbl.	65	“	95
RYE	per bush.	62	“	64
SALT	per sack	1 35	“	1 50
SHOULDERS, Smoked	per lb.	3	“	4½
Pickled	do.	3	“	4
SPIRITS TURPENTINE, Southern	per gal.	33	“	36
SUGAR, New Orleans	per lb.	5	“	7½
SUMAC, American	per ton	25 00	“	27 50
TALLOW	per lb.	6	“	7½
TAR	per bbl.	1 25	“	1 50
TIMOTHY SEED	per 7 bush.	13 00	“	14 00
TOBACCO	per lb.	3	“	6½
TURPENTINE	per bbl.	2 62	“	2 87
WHEAT, Western	per bush.	1 00	“	1 05
Southern	do.	90	“	1 00
WHISKEY, American	per gal.	23	“	25
WOOL, Saxony	per lb.	35	“	50
Merino	do.	30	“	35
Half-blood	do.	25	“	27
Common	do.	18	“	23

New York Cattle Market—December 25.

At market, 700 beef Cattle, (100 southern), 30 Cows and Calves, and 1000 Sheep and Lambs.

PRICES.—*Beef Cattle*—In consequence of a small supply, we have to note an advance—retailing qualities $4.25 *a* 75 to $5.25 *a* 50, with sales of extra at $6—200 unsold.

Cows and Calves.—All taken at $16 *a* $26.

Sheep and Lambs.—All taken at $1.25 *a* $4.50 as in quality.

Hay.—At the close of our report the supplies are scanty; sales at 75c. per cwt. for loose.

REMARKS.—*Ashes* are in fair request. *Cotton* is brisk, with a very active demand, and although our prices are above what the English market will warrant, they still have an upward tendency, from the fact that we know the deficit of a short crop, and can better calculate than Europeans, the prospects on an advance. Exports from the United States since 1st September last, 172,314 bales; same time last year, 269,298; same time year before, 198,161. *Flour* and *Meal* are in fair demand. Of the former it is ascertained that there are about 400,000 bls. in store in this city. *Grain* of all descriptions in moderate request. *Hay*, there is none afloat, and what is in store is held above the views of shippers *Molasses* heavy. *Naval Stores* have a downward tendency. *Beef*, *Pork*, and *Lard* at this moment are quite dull. *Rice* has come more into demand. *Seeds* continue firm. *Sugar* rather sought after. *Tobacco*, considerable sales. *Wool* is very active, and sales increasing, especially in the middle qualities. *Dressed Hogs*; $4.50 to $5.00; at Cincinnati, $2.25 to $2.67. *Black-Eyed Peas*, $1.38 per bushel. *Money* is rather more in demand. No material alteration in rates.

Real Estate is fast coming into request.

Stocks are without change.

ANSWER TO CORRESPONDENTS.—J. H. H. We shall request some of our Virginia friends to answer your inquiries. They can do it better than we.

M. L. S. Will you be so good as to forward us, by private conveyance, a small quantity of blue sedge-grass seed. We mean the tall, nutricious grass, of the barrens; at the same time send us its botanical name, and a description, and some of the dried grass itself, full length.

The Dollar Farmer will please direct us an extra copy beginning with its present volume. We wish to send it to a subscriber in England. Shall we send cash for this, or an extra copy of our paper in exchange?

T. H. The sheep shall be attended to, and we will write you soon about Devons.

To English Correspondents.—Our postages are as exorbitant, nearly, as your own, previous to the penny system being introduced into Great Britain, and if a letter contains four pieces, although the whole of them may not weigh as much as a letter-sheet, it is taxed full postage on every piece it contains, which would be quadruple in this instance. In writing to America, till our oppressive Post-Office law is changed, always use a *single* sheet, without an envelope. Printed matter send by itself, done up as near newspaper form as possible. Messrs. Wiley & Putnam are our agents in London, and will forward books, pamphlets, &c., at a small cost in their packages.

D. B. Birney, A. S., James H. Hepburn, F. J. Betts, S. S., J. J. McCaughan, J. H. Lyman, and Wm. H. Sotham, will appear in our next. Although the latter's communication was dated the 6th of Dec., it did not reach us till the 25th—of course too late for this number.

HOVEY'S HORTICULTURAL MAGAZINE.

We have recently been appointed agents for this periodical, justly considered the most valuable of its kind in the United States. Any person subscribing through us will be promptly served, and we invite all interested in this subject to call and examine the work.

For any of the above works, or periodicals, or books of any kind, address SAXTON & MILES, 205 Broadway.

Price $3 a year.

CASH FOR A FARM NEAR NEW YORK.

A Farm wanted near New York, of 50 to 100 acres. It must have an attractive location, be easy of access to the city, and possess a good soil. One that has not expensive buildings on it would be preferred. Address the Editor of this paper, or box 354, lower Post Office, with general description, and stating where an interview may be had. 3t*

POUDRETTE

Of the very best quality for sale. Three barrels for $5, or ten barrels for $15—delivered free of cartage by the New York Poudrette Company, 23 Chambers street, New York. Orders by mail, with the cash, will be promptly attended to, and with the same care as though the purchaser was present, if addressed as above to

Dec. 1, 1843.—3t. D. K. MINOR, Agent.

PROPOSAL FOR A COURSE OF LECTURES ON AGRICULTURAL CHEMISTRY.

By D. Pereira Gardner, M. D. Formerly Professor of Chemistry and Botany in Hampden Sidney College, Va., Member of the Lyceum of Natural History, New York.

The Course is intended to be of service to the practical agriculturist, and therefore the methods of discovering and estimating the amount of useful saline matters in the soil will be fully examined. Portions of Botany, Vegetable and Animal Physiology, will be included, to enable the farmer to understand all that relates to the food of plants and animals. Geology, so far as it is necessary to the study of soils and the art of drainage, will be introduced. The action of Manures, and the quantity that may be economically applied, will also be considered.

The Course will be fully illustrated by drawings, minerals, geological specimens, chemical experiments, and analysis.

The number of lectures will be twenty, distributed in nearly the following order:—

One Lecture—On the Constitution of the Atmosphere and Gaseous Matters.

One Lecture—On the Essential Structure of Vegetables.

One Lecture—On the Supply of Gaseous Food to Plants.

Two Lectures—On the Physical and Chemical Constitution of the Soil, and its relations to moisture and drought, the theory of drainage, fallows, &c.

One Lecture—On the Organic Food of Plants.

One Lecture—On the Mineral Food of Plants.

One Lecture—On the Influence of Gases, Water, and Saline Matters, on the production of nutritious substances in plants.

One Lecture—On the Nature of the Chemical Processes in Plants, and the methods of developing them.

One Lecture—On the Comparative Value of Fodders.

Four Lectures—On the Analysis of Soils, in which the methods of determining the quantities of saline and organic matters will be experimentally shown.

Two Lectures—On Mineral Manures, derivable from the geological formations of this and the adjoining States.

The classification of manures, mechanical, simple, complex, and organic; their values, preservation, and collection; the proportions in which they should be applied, &c., will conclude the course.

The Lectures will be delivered in the University of New York, on the evenings of Wednesday and Saturday, at half past seven o'clock. Fee for the course, 5 dollars.

The Lectures will commence on Wednesday, the 27th December, should a sufficient number of Subscribers be obtained.

Subscriptions received at SAXTON & MILES', 205 Broadway, office of American Agriculturist.

SILK MACHINERY FOR SALE.

A quantity of Machinery for the manufacture of Silk, is offered for sale at the State Prison, Sing-Sing, N. Y., consisting of looms for weaving broad silks and braids, together with engines and reels for making cords, winding floss, sewing-silk, and from cocoons; likewise a number of other machines used in the manufacture of silk.

This machinery is now in practical operation at the Prison, and was constructed under the immediate superintendance of an experienced and skilful manufacturer, who still has the works under his charge, and is offered at private sale, between this date and the 15th of February next. If not disposed of at that time, will then be sold at public auction in New York.

For further particulars apply at the Prison, to

WM. H. PECK, Agent.

Dec. 23, 1843. 2t

IMPORTANT AGRICULTURAL WORKS,

On sale by P. L. Simmonds, Agricultural Agent, 18 Cornhill, London.

JOHNSON ON FERTILIZERS, published at 12s., reduced in price to 8s., one of the best, most complete, and popular works on manures extant.

THE IMPLEMENTS OF AGRICULTURE, by J. A. Ransome, illustrated by numerous highly-finished wood-cuts, price 9s.

THE FARMERS' ALMANAC, by Johnson & Shaw, for the years 1841, '42, '43, '44, 200 pp., 1s. each. An invaluable handbook, full of sound practical information; and useful to agriculturists at all times, and in all places.

AGRICULTURAL CHEMISTRY FOR YOUNG FARMERS, by C. W. Johnston, Esq., F. R. S., 1s.

A CALENDAR FOR FARMERS, by the same, 1s.

THE FARMERS' MAGAZINE, published monthly, 1s. 6d. each.

Just Published by SAXTON & MILES,

THE SILK QUESTION SETTLED.

The testimony of ONE HUNDRED AND FIFTY WITNESSES. Being the Report of the Proceedings of the National Convention of SILK-GROWERS AND MANUFACTURERS, held in New York, Oct. 13th and 14th, 1843. Published under the direction of the American Institute. By J. R. Barbour.

Price 25 cents.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 miles, without the State.

ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume 1 of THE AMERICAN AGRICULTURIST, with table of contents complete, for sale at $1; handsomely bound in cloth, $1 25. It is a neat and tasteful book, and makes a handsome premium for distribution with Agricultural Societies; to which, when several copies are ordered, a liberal discount will be made.

☞ To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster,

Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway. New York.

AGENTS FOR THE AMERICAN AGRICULTURIST.

John Halsall, Bookseller, St. Louis, Mo.
G. S. Taintor, Bookseller, Natchez, Miss.
S. F. Gale & Co., Chicago, Ill.
John J. Herrick, Detroit, Mich.
J. B. Steele, New Orleans.
C. M. Hovey, Boston, Mass.
Saxton, Peirce, & Co., Boston.
Arthur D. Phelps, Boston.
R. H. Hendrickson, Middletown, Ohio.
Andrew Campbell.
E. Cornell, Ithaca, N. Y.
H. Kirkland, Northampton, Mass.
John Bonner, White Plains, Georgia.
J. R. Cole, Philadelphia, Pa.

CONTENTS OF JANUARY NUMBER.

EDITORIAL.

Page
The Times, - - - - - - - - - - - 1
A Farmer's Education, - - - - - - - - 2
Cultivation of Cleared Lands, - - - - - - - 3
Farm of George Douglass, Esq., - - - - - - - 4
Twin Chickens,
Country Villa, } - - - - - - - - - 5
Shelter for Stock,
Marsh-Mud,
New York Farmers' Club, } - - - - - - 6
The Present Winter, - - - - - - - - 7
Disease in Potatoes,
Annual Meeting of the N. Y. State Agricultural Society,
Quantity of Butter made from Milk, } - 8
Scalded Milk for Butter,
Virginia Lands,
Oil Destructive to Plum-Trees,
Bommer's Patent Method of Making Manure, } - - - - 9
Change of the Quality of Fruit at the West,
Miscellaneous,
The Polotokian, or Artificial Chicken-Hatcher, 28
Foreign Agricultural News, - - - - - - - - 29
Editor's Table, - - - - - - - - - - - 30
Review of the Market,
To Correspondents, } - - - - - - - - 31

ORIGINAL CORRESPONDENCE.

Devon Cattle, L. F. Allen, - - - - - - - - 10
Origin of Chess, James Bates,
Culture of Coffee, S. B. Parsons, } - - - - - 14
Aviary, or Fowl-House, H.,
Culture of Hemp-Seed, A. Beatty, } - - - - 16
" " Pindars, John J. McCaughan, - - - - - 18
Mules for Agricultural Purposes, R. L. Allen, - - - 19
Grama, or Buffalo-Grass, J. H. Lyman, - - - - 22
Experiments with Guano, E. Teschemacher, - - - 23
The Pulverizer, do.
Agriculture of North Alabama, G. L. Cockrill, } - - 25
Northern Calendar for January, Am. Ag. Almanac, - - 26
Southern do. do. " " " - - 27

THE

AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. III. NEW YORK, FEBRUARY, 1844. NO. II.

A. B. Allen, Editor. Saxton & Miles. Publishers, 205 Broadway.

HINTS FOR CHOOSING MEAT AT MARKET.

We have often been surprised at the ignorance displayed by housekeepers, in the selections which they frequently make at the market for their family supplies. Many seem to think if they have chosen from an overgrown beast, or bird with large bones, and loaded with masses of fat upon its flesh, that they have been particularly lucky, and secured an excellent dish; when, in all probability, they have taken the very worst, and the least profitable for consumption. In purchasing a quarter of any animal, or pieces from it, we should select such as have the smallest, thinnest, and flattest bones; covered by the finest-grained flesh, with the fat intermixed in thin streaks or layers with the lean. This will almost invariably be found tender, juicy, and profitable. On the contrary, meat with large, round, thick bones, of a coarse grain, and showing the fat in thick slices or large lumps, will prove tough, unsavory, and so far as the profitable part of it is concerned, not worth so much by 25 to 50 per cent. as the finer bone qualities. Poultry which has long, coarse legs, neck, and head, ought to be avoided; while that with short, fine legs, long, round, and plump bodies, and a fine, short neck and head, if of a suitable age, should be preferred. These remarks do not apply with the same force to fish; for several kinds of the most bony are very good eating, although they may not be as profitable as those with fewer bones. The most delicate, however, have rather a small number of bones compared with the amount of meat they give; for example, the salmon, bass, cod, and mackerel of the salt water; and the Mackinaw trout, muscalonge, and white fish, of the fresh water. Very large vegetables are not usually as delicate as those of medium size; but to this rule there are many exceptions. As for fruits, the largest are usually the best.

THE ENGLISH OAK IN AMERICA.

We have been kindly favored by Mr. D. Jay Browne, who is about to publish a work on the "Trees of America," with the following information respecting the English oak, (*Quercus robur,*) as successfully cultivated in this country.

This noble, beautiful, and useful tree was first introduced into the United States in 1802, by Mr. E. H. Derby, of Salem, Massachusetts. He imported six small plants in garden-pots, about eighteen inches in height, which are now tall trees of nearly as many inches in diameter. They have long borne acorns, from which other trees have grown more than forty feet in height, and nine inches in diameter. These trees are perfectly hardy in our climate, and what is very desirable, as ornamental trees, their foliage remains green at least six weeks longer than the American species. We understand that Mr. Derby has a nursery of about 1,000 young oaks ready to transplant for permanent growth, which he will sell at 50 cents each, single, or at a reasonable discount where larger quantities may be required. We can not too warmly recommend the cultivation of this stately tree, either for ornament or profit.

LIME AS MANURE.

There are considerable portions of our country where the application of lime for agricultural purposes has not yet been introduced. When it can be had at reasonable rates, we are satisfied it is in almost all cases a profitable application as a manure. The result of so many and well-weighed careful experiments, would seem to have put its manifest utility beyond any question. In adverting to lime at this present moment, our main design is merely to suggest some of the most obvious occasions for its use.

In almost all soils where lime does not naturally exist, either as pulverized rock, shells, or marl, its application is attended with decided advantage. It may be used at the rate of 50 to 150 bushels per acre the first year, and from 20 to 30 bushels per acre every three to five years after, according to the circumstances of the land, the kind of crops and rotation. We are aware that some will differ with us in recommending the use of so small a quantity; they contending, that where oyster-shell, or stone lime free from magnesia, is used, from 200 to 500 bushels may be safely put on the acre, and then the land will want no further application for ten to fifty years. The objection to such large quantities is, that the lime rapidly exhausts the organic matter in the soil, and it requires a great quantity of manure, and a long time of rest to restore it. If the soil be a stiff clay, and full of inert vegetable matter, such as fibrous roots, undecayed vegetation, or peat, much larger quantities should be used than on lighter soils, and those more free of the above organic matter.

Lime should be applied by dumping it in small heaps, and allowing it to slack to a fine powder by the air, or by throwing water upon it if convenient, and then as soon as this is accomplished, spread it broad-cast upon the land. Sea-water is much better than fresh for slacking lime, as it adds to its fertilizing qualities. Some contend that thus slacked it will have double the effect upon the land; but we consider so great a difference as this a matter of doubt. The reason of allowing lime to slack before plowing it into the soil is, that it absorbs from the air the carbonic acid which has been expelled by heat. It is an unnecessary waste to apply it as quicklime to the soil, and allow it to seize on the carbon it there finds. It is very greedy of carbonic acid, and it will soon absorb from the atmosphere all that is required for its saturation.

After being well slacked and spread, the lime should be plowed in, not too deep, and as thoroughly incorporated with the soil by harrowing as possible. The effect it now has upon the soil is to decompose the vegetable matter, and render it at once food for plants. Lime is almost equally advantageous to all crops, fruit-trees, and whatever constitutes the object of the farmer's attention. Good crops may in numerous instances be grown without the use of lime; but in almost all would they be greater or more enduring with the same quantity of manure. It gives increased efficacy and lastingness to the manure.

On grass-fields, lime may be scattered broadcast, and its beneficial influence is soon witnessed in the improved health and increased quantity of the grass. Fields thus dressed will resist drought much better than they otherwise would, lime having a greater affinity for moisture, and drawing largely at all times from the atmosphere.

Besides its effect on manures, lime produces a most beneficial influence on many soils. Some of these contain deleterious substances, such as vegetable acids, the salts of iron and manganese, &c. The lime, when brought into contact with these, at once combines with the acids, and converts what was positively injurious to vegetation, into what is positively beneficial to it. The same effect is produced in peat soils which are saturated with tannin and gallic acid. These it combines with, and not only render innocuous, but converts into a substance highly favorable to vegetation. On sandy soils it is very useful by rendering them more compact, retaining the manures, and attracting moisture; while on clay soils it partially breaks up their adhesiveness by insinuating its particles between the alumina, and there undergoing various chemical combinations, it tends to make it more porous.

Winter is the most appropriate time for burning lime, and it may be applied to the land as soon as the snow has melted off in the spring.

New Experiments in Agriculture.—We have frequent conversations with gentlemen on the subject of agricultural experiments which they have made, and that are of considerable practical importance. The results of all such as are well known and thoroughly tested, we wish to spread before the community for the benefit of all our readers. Yet such is the modesty of many of our informants, that they seem unwilling not only to communicate the information over their own signatures, but are even reluctant to have it mentioned in any shape. We hope all our friends will have done with such diffidence, and give to the public at once what rightfully belongs to it. No improvement, however minute, is without its use to the agricultural community, and whatever will save a single dollar to each farmer in the United States, will save millions to the nation.

SKETCHES OF THE WEST.—NO. III.

Lexington.—From Versailles we rode over a beautiful undulating country, and in a short time arrived at Lexington. This is a very handsome town, of about 6,000 inhabitants, and presents the appearance of considerable opulence. The streets are regularly laid out, a branch of the Elkhorn meandering through the town, and in its clear course adding much to the beauty and variety of the place. A richer or more favorable agricultural district can not be found than that which surrounds Lexington in a circle of 60 miles. Added to this, it is healthy, and settled by a highly intelligent and enterprising population. In fact, the people here consider it as approaching Eden, and it is very agreeable to hear them amplify on its capabilities, which they do, and very justly, with an eloquence that can not be gainsaid. The Kentuckian yields to none in love of his country, and the western hemisphere may be travelled over in vain in search of one more deserving of being loved.

Ashland, Seat of the Hon. Henry Clay.—This beautiful seat and superb plantation, of one of the most gifted and celebrated men of America, is about one and a half miles from Lexington, and is approached by an excellent Macadam road leading directly by it. We called there in company with a nephew of Mr. Clay, Mr. Pindell of Lexington; who took us by a circuitous road, first showing us his own fine plantation, a little beyond that of Ashland. The buildings on it are handsome and commodious, and there was a choice collection of stock of all kinds, particularly of blood horses. One of the fillies, the name of which we have forgotten, struck us as being as promising an animal of her kind as we saw in Kentucky. Mr. P. had repeatedly exhibited her at their agricultural shows, and she had invariably carried off the first prize over all competitors.

A division-fence separates the property of Mr. Clay and Mr. Pindell, which we passed by a wide gate and came immediately into the woodland, or more properly speaking, park pastures of Ashland, the trees of which are mostly the reservations of the original forest. They are grand and majestic in their appearance, and give a dignity, comfort, and beauty to the landscape, which can not be too much admired. It was still in the month of January, but the winter being a mild one, the grass was yet green, and a fine lot of blood horses, and Short-Horn cattle were out feeding, and looking as fat and sleek as need be. The show of these, Mr. Pindell informed me, was not so good as formerly, Mr. Clay having been tempted, when high prices prevailed, to part with the greater proportion of his choicest animals. After taking a full view of the plantation, we came round to the stables, the most celebrated incumbent of which was a large French Jack, named Royal. He was selected by Mr. Henry Clay, Jr., when he visited France, and was bred at Poitou, near the birthplace of the celebrated Montesquieu. Whether from this circumstance Royal has inherited any of the legal talent of the profound jurist we are unable to say, he not yet being gifted with the power of speech to explain himself, as was Balaam's ass of old; but what, perhaps, is of more utility where stationed is, he has the faculty of stamping his superior size and strength on a numerous progeny of mules, to the great benefit of the country around him.

When we called at Ashland, Mr. Clay was passing the last of his term at Washington in his senatorial duties; we, therefore, missed the advantage of seeing him at home on his farm, where he is universally acknowledged to rank as high as in the councils of the nation. He has ever been foremost in every good word and work in agriculture in Kentucky, and perhaps few have done as much to assist in developing and improving the resources of his native state. No one was more ardent and persevering in the introduction and growing of hemp than Mr. Clay; in the introduction also of improved stock, and all other measures calculated to promote agriculture, which, although well known at home, yet, on account of his brilliant forensic talents, his labors and example in this department, have in a measure been overshadowed and kept hid from the nation.

The mansion-house at Ashland is roomy and handsome, and such as a refined country gentleman may have been supposed to erect for his own comfort and convenience. The grounds are ample and beautiful, abounding with what we most admire in winter, a profusion of lofty evergreens. The views from the spot are charming, embracing the town of Lexington just beyond, and a fertile country of considerable extent in quiet repose around. In the absence of Mr. Clay, his respected lady received us very politely, and we found her presiding with equal dignity and grace over the affairs of the household; where, to her honor be it spoken, and also in the general management of the plantation, she as eminently excels, as her husband in the Legislative Halls—proving herself an admirable wife for one whose public duties have so often called him away from his home.

We are fearful of trespassing upon the sanctity of private life by dwelling longer upon this theme, and will only add that we felt no less honored than gratified by our visit to Ashland, and at our departure could not but breathe more strongly than ever, the wish that its possessors may soon be transferred by the voice of this great nation, to that exalted seat which their eminent talents and virtues have so well fitted them to adorn and fill.

Tour in England. No. 17.

An English Farmer.—Gazing over the stock that weekly graces the market square of the ancient town of Abingdon, and occasionally chatting with its sturdy owners, among others we were particularly struck with the fine appearance of a young farmer of some six and twenty, who was chaffering for a lot of sheep. He was dressed in white top boots, drab breeches, linen faultlessly clean, a black hat with rather a wide brim, and, instead of a coat, he wore the common farmer's-frock of the country, covering his under dress, and reaching down to the tops of his boots. He stood full six feet high, with broad shoulders, full chest, and in his whole person was a model of health, strength, and manly beauty. In his hand he held a long whip, and when we first observed him, he was bargaining for a lot of sheep with a wiry looking old man, in leather gaiters, and hob-nailed shoes. We were looking for some stock of a particular kind, and had been informed that the young man before us was considerable of a dealer, and that he would be able to furnish whatever was wanted.

After finishing his bargain for the sheep, which judging from the loud cracks and abundant flourishes he gave upon winding up with his whip, seemed to be quite a gratifying one, we jogged him on the shoulder, and made known our wishes. He said he had not the stock himself, but if we would go home with him and stay a few days to make some excursions, there was no doubt he would be able to procure all we wanted. This was just the thing to suit, so we unhesitatingly accepted his frank invitation; when, giving directions to a fat, pumpkin-cheeked boy who was accompanied by a sharp-nosed colly dog, (just the antipodes of his own,) to drive home his sheep purchase, we walked down to the inn, where, after smoking a long pipe, and sipping a silver tankard of strong beer, in both of which operations he greatly wondered that we declined joining, he ordered up his bob-tailed cob and spring cart, and away we trotted at an easy pace over a smoothly gravelled road, discoursing upon all sorts of farming matters—we perfectly astonishing him with a few *long-bows* which we took the liberty of occasionally drawing by way of variety, on the fertility and productions of our own country.

His residence was some ten miles or so from Abingdon, on the further edge of one of the oldest hamlets we visited in England; situated in a smooth gorge of a valley, and lying scattering along a narrow winding road for about a quarter of a mile. The farm was a small one of 79 acres only; the out-buildings old and rather inconvenient. We arrived here at twilight, and as there was no road to the front of the domicil, we found our way there by first bringing up in the stone-paved barn-yard, from which a wicker gate led through a small patch of a garden; to this was joined a few square rods of lawn, and at the end stood the cottage, a genuine antique throughout, with thick brick walls; dark oaken door, diamond-pane windows leaded in iron sashes, and low thatched roof. What a contrast to the smart white paint, and green Venetians of our own country! But if things looked old and somewhat gloomy without, they were extremely neat and comfortable within. The presiding genius of this was of course my friend's wife—a fair, nice woman, though not equal in personal appearance to her husband. She informed us that she not only attended to the affairs of her small household, but milked the cows, and did all the light work in the garden, and kept the lawn and its few flowers and shrubbery in order.

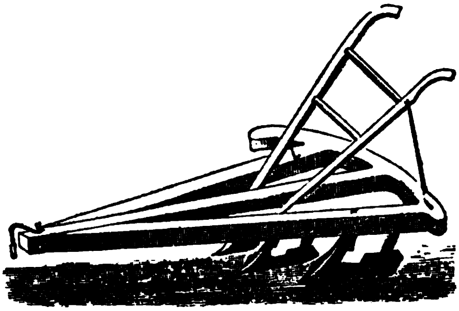
Supper was soon made ready, to which we needed no second invitation, as in the case of the pipes and beer, but set down at once, and did ample justice to all before us. When we retired, we were shown to a low chamber in the gable-end of the attic. It was sufficiently roomy, and perfectly neat—the linen, spread, and curtains of the bed as white as the driven snow. On a small, half-round table lay a few books, which were precisely those, with one exception, we are most certain to find at the farm-houses of our own country; being the Bible, Pilgrim's Progress, Baxter's Saints' Rest, Tusser's One Hundred Points of Good Husbandry, and a volume of Tracts, among which the first we opened to was that beautiful tale, by the Rev. Leigh Richmond, of the Dairyman's Daughter. This we first read when a mere child, with an impression and interest that no story in our subsequent multifarious reading has ever surpassed. Reposing upon our pillow, we snuffed the flickering candle, and here, in the country which gave the author birth, and not far from the scene of the tale itself, again went over its absorbing incidents. How many brilliant romances, filled with the vanities of this world, will rise and fall—even the very names thereof perishing from the earth, when this true and simple story, of a meek and lowly Christian maiden, shall become more and more widely known, and flourish. God bless the authors of such heavenly tales!

The farm, as we said, contained 79 acres; the four-course system was adopted upon it, and in most things it was a model of cultivation. The first year the land was manured and sowed with turneps and mangel-wurzel. These were principally fed off by sheep consuming them on the ground, and of course richly manuring it with their droppings. This was sowed with barley and oats, with grass-seed or clover in the spring, which occupied the second year. The third year, the grass and clover was pastured by enclosing the sheep with a moveabla hurdle-fence, on an acre or so of the grass, and as soon as this was eaten, the fence was moved on to another acre, and so continued till the grass was all fed off. The sheep thus leave their manure scattered over the land as evenly as it can be done with the shovel; it is then plowed and sowed to wheat. Wheat, we were informed, after clover fed off by sheep, is found to suffer less from mildew, rust, the fly, and indeed all diseases to which it is liable, than by any other preparation by which it is grown in England. This is a much superior method to plowing in clover for wheat as practised in our own country. Green crops beneath the earth undergo a rapid fermentation, and turn all their sugar and starch into gases, which are lost in the air, and vinegar which washes away, and leaves the soil so sour as not unfrequently to require rest, or the application of lime to restore it to a fit state for cropping. How much wiser the English to turn the sugar and starch of their grass into mutton and wool, and then have their land left in a much more perfect state for a wheat crop. We are satisfied that the system of feeding off clover in our own country with sheep, preparatory to a wheat crop, would pay as well as in England. We have strongly urged the measure upon several of our friends since our return, but have not yet succeeded in getting one to adopt it; we hope to be more successful hereafter. Bu[illegible]o return to our subject.

This young man paid in rent and taxes for his land 37*s*. 6*d*. per acre, which is £143. 2*s*. 6*d*. (say $700.) The first year he took the farm he had 15 acres of wheat, which averaged 29 bushels per acre; but by superior management, on the third year he had increased the crop to 41 bushels per acre, and had 20 acres in wheat. This, the fourth year, he calculated confidently the wheat would average 43 bushels per acre, and judging from the appearance of the crop when we looked at it just before harvesting, we thought he had not overrated it. His wheat was of a superior quality, and would be worth, as soon as he could get it to market, 73s. the quarter, or in round numbers, $2 per bushel our money; allowing that the 20 acres only yielded 40 bushels per acre, this would be 800 bushels, worth $1,600. Then he had 20 acres in barley and oats: the former did not look so well, and would not be over 27 bushels per acre, which was attributed to bad weather and late sowing; but the latter made ample amends, and he estimated them to yield over 70 bushels per acre. That we may be fortified in our statements, we shall add, that a neighbor of his with whom we conversed, and a very reputable man, informed us that he had raised 96 bushels of Tartary oats to the acre, 50 of wheat, 58 of barley, and 51 of beans. What the value of the oats and barley were likely to be we neglected to note. Twenty acres were in turneps and other roots; 15 acres in vetches, clover, and grass, with which he was feeding off his sheep, and 4 acres for buildings, garden, and a small paddock for two cows. He kept a flock of about 50 sheep, on which he probably cleared $3 per head, he not breeding them, but buying in and fattening, and then sending them to market. This made $150 more. In addition to these he had a few pigs, two cows, and four horses. The horses were stabled all the year round; the cows roamed in the paddock in summer, and were stalled as occasion demanded; the pigs graced the barnyard, and with this stock, straw, and other resources of the farm, sufficient manure was made, with the additional purchase of a small quantity of lime and bones, to heavily manure for the root crops, and regularly advance the fertility of the land. Thus the gross income from 79 acres of land, would not be less that year than $2,500, estimating ten acres of barley at $270, ten acres of oats at $380, pork and product of the dairy $100. As he worked on the farm himself, his labor probably did not cost to exceed $300, which, added to the rent, make $1,[illegible]00, leaving a round profit of $1,500. The expenses of supporting a family, wear and tear of implements, &c., &c., were probably about the same with this young man, as they would be with one of our own countrymen, on a farm of one hundred or a hundred and fifty acres. Prices of produce in England have probably fallen one third since we were there; but even then, this farmer would be doing a good business. As he was of ordinary education, we asked him how he got the information which enabled him to manage his farm so well. He replied, by the common practice of the country, and by books, though more by attending their farmers' Club meetings, where the best course of cropping, management of lands, manures, improved seeds, stock, and agricultural implements were discussed among a considerable body of intelligent farmers. Thus it is, and with enlightened landlords to occasionally direct and instruct, and bestowing more labor upon less land, that the English are so much our superiors as a general rule in exact and scientific cultivation, and we fear we must add profitable farming.

Being capital stock himself, our friend was successful in showing us what we wanted, and as he had given us some good lessons on farming, we could do no less than drop a few hints in return. He used a double-wheel, awkward, old-fashioned plow, weighing little less than 300 lbs. To this was attached in line, (one before the other,) to drag it, three large, coarse horses, very fat, and slow moving. It took a boy to drive them, and a man to hold the plow, and they averaged, we believe, not much over an acre per day. We assured him with a lighter and better made plow, and smaller, quicker stepping horses, a single pair and a man to hold and drive would easily accomplish more work than he was now doing. We also advised changing the mangel-wurzel for sugar-beet, as it would yield full as much per acre and was more nutricious, and thought white carrots would eminently succeed on a small portion of his soil. All these he promised he would adopt as speedily as possible; but as English farmers, like our own, are slow in changing for "new-fangled notions," we are somewhat doubtful whether all our suggestions are yet carried out. We hope to cross the Atlantic again one of these days, when we shall make it a point to ascertain.

THREE-SHARE PLOW.—(Fig. 6.)



Above we give a cut of the Three-Share Plow exhibited by Mr. Thorp, at the late show of the American Institute, and we hope that Mr. Potts and any other of our southern friends who feel an interest in the matter, will give us their opinions upon its applicability to the culture of the crops at the south, and also suggest any improvements which may be thought advisable. The sketch shows the construction of the instrument so perfectly, that it needs little description. It spreads 2 feet 4 inches wide, and its shares are precisely like those of the common plow, only very much smaller. We should think it would not weigh to exceed 90 lbs., which is a light draft for a pair of mules. By passing it once up and down between the rows of corn, cotton, or cane, it will completely turn up and bury the weeds and grass, and at the same time slightly throw the soil between the rows, to or from the growing plants, or leave it nearly level, as is desired. If it be wished to throw more soil to the rows of cane, &c., a one, or two-horse plow can be run down on each side of the rows, turning the dirt toward them, and then follow with the three-share plow. The only suggestion which we can make as an improvement to the above, is to add a wheel at the end as in the ordinary cultivator. This would make the draft easier, and enable the plowman to go deeper or shallower in the soil as required. Mr. Weird exhibited a four-share plough at the same time, but as he did not leave it at the American

Institute, we can not give a cut of it. Shares may be multiplied to any number, so as to clear out furrows from four feet, to as much greater width as desirable.

FOREST LEAVES AS MANURE.

It is well known that the leaves of trees make a most valuable manure; but they are so light of weight that it is rather troublesome gathering them. Mr. Cadmus, of Long Island, has given us his method of collecting them, which we think is the best we have yet heard of. He takes a common dung-fork, and striking it lightly into the surface soil, when not frozen, which the leaves cover, it will easily peel from the subsoil from one to three inches deep. As it is loosened in this way roll it over on the leaves, and as soon as a good fork full is obtained, throw it into the wagon. The leaves and top soil are thus taken up quite rapidly, and the latter weight for weight, for many purposes, is scarcely less valuable than the former. They make one of the very best manures for nurseries, orchards, and gardens. Along their sides, and particularly in the corners of fences, large quantities of decayed leaves and rich soil may be found; and we know of nothing more valuable to be mixed with manure in the barnyard, or to make a compost of with lime, ashes, charcoal-dust, and other substances.

MANAGEMENT OF STABLES.

At a late meeting of the Royal Agricultural Society of England, Mr. Reece submitted a paper, detailing several experiments in the disinfection of stables, by the absorption of ammonia generated in them, which we briefly copy.

The stables were, in the first instance, strewn with gypsum, (crystallized sulphate of lime,) coarsely powdered; but though the ammonia was evolved from the wetted straw, no trace of it was visible after two days' exposure when examined with slaked lime. The stables were then strewn with the gypsum moistened with sulphuric acid, and when examined next morning, every portion was found to have absorbed sufficient ammonia to emit its peculiar pungent odor when brought into contact with slaked lime. The stables had lost their close, unhealthy smell, and, to use the words of the grooms, appeared to be quite sweetened. As it was evident the gypsum acted merely mechanically, affording a convenient absorbent surface for the acid, some further experiments were made, substituting sawdust for gypsum, which were attended by still more favorable results. The prepared mixture should be laid upon trays, as the acid is considered likely to injure the horses' feet. One part of sawdust will readily absorb three times its weight of acid solution, which would be mixed in the proportion, by measures, of one part of sulphuric acid to fifteen of distilled water. The ammoniacal salt makes an excellent manure, but it should not be mixed with the straw until after removed from the stable.

Now we must be allowed to doubt the efficacy of these experiments in the fulness with which they would seem to be commended to us. That some of the ammonia is absorbed by the sulphuric acid is not questioned; but that it takes place to anything like the absorption of all, or nearly all the ammonia generated, may well be doubted. We would like to see the experiment, however, by some of our citizens who would send us the results. The ammonia is very injurious to the eyes of the horse, and the groom, and frequently is the cause of severe inflammation.

Sulphuric acid diluted with about 50 parts of water, and sprinkled on the straw, where it would come directly in contact with the ammonia, would be much more likely to seize upon and combine with it; and weakened to the extent suggested, it would not probably injure the feet of the horses. But we think charcoal strewed in and around the stables would absorb it equally, or even more effectually at a cheaper rate, and with greater advantage to the manure.

TOOLS FOR BOYS.

Has your father a carpenter or blacksmith's shop upon his farm? If not, get him to build one of each immediately; and whenever he hires a carpenter or blacksmith to come and do his odd jobs, be sure you go in and look on and help until you get the use of every tool in each shop. You will be several years in doing this, so don't be discouraged if you can't do all your little work to please yourself at first; your hand-sleds, your steers'-sleds, and steers'-yokes. Martin-boxes and hen-coops you ought to make yourselves, together with many other things; and then there are the farming tools—all ought to be of a size suited to your age, and of the best quality. Some fathers turn off their boys with old wornout tools; this is wrong, you ought to have a little scythe and a little axe, both very sharp, and then you ought to be taught how to keep them so; and also how to use all your tools skilfully. Never slight any kind of work, but do it well, and if you can not keep up with older persons laboring at the same thing, they ought to help you rather than let you lag behind. Never indulge a lazy spirit; your father or guardian will see that you are not over-worked, and will always give you sufficient time to rest and go ahead with your studies every day; yet you will do more work than those dull-heads who neither read nor study at all. Farming work, above all others, is the best to make boys grow, and give them strong and vigorous constitutions.

LECTURES ON AGRICULTURAL CHEMISTRY.

Dr. Gardner has already delivered nine lectures on Agricultural Chemistry, at the University of New York.

1. On the composition of the air, its absorption by soils and fluids, the character of the gases of the soil.
2. On the passage of fluids through vegetable and animal membranes, and its importance in vegetable phenomena.
3. The structure and functions of plants.
4. The sources of carbonic acid as food for plants, showing the necessity of humus in the soil for the cultivation of many plants.
5. The sources of nitrogen, and means of increasing it in the soil.
6. The oxygen and hydrogen of plants, and the processes of fermentation, decay, &c.
7. The saline composition of plants, and its importance to the vegetable.
8. The value of fodders, time of cutting grain, clover, wheat, &c.
9. The physical character of soils, and the means and objects of pulverising, draining, fallowing, &c.

We had notes of these very excellent Lectures, and intended to have given a synopsis of them in this number; but owing to the crowded state of our columns, we have found it quite impossible. They have been listened to by a large class in attendance with high gratification, and we are pleased to learn, that they have excited so much attention in the public mind in this city, that Dr. Gardner will probably be called upon to repeat them. For the good of the agricultural public we really trust that this may be the case.

ANNUAL MEETING OF THE N. Y. STATE AG. SOCIETY.

We are favored by a friend with a short note, detailing the proceedings of the State Society at its late annual meeting on the 17th of January, at Albany, and are also indebted to the Cultivator for a proof sheet of the same in advance of its regular publication; but unfortunately both came too late for an insertion this month, our paper, with the exception of this page, being made up. We have only space for a short notice. No annual meeting was ever so well attended, and uncommon interest seems to have been imparted to its proceedings. The next show, (we will not use the improper word "*fair*,") is fixed to be held at Poughkeepsie, at which we are rejoiced, as we think it is justly due to the southern and eastern portions of the state. We shall now expect to see the Hudson river counties exert themselves. We are of opinion it will be the largest meeting, with the greatest agricultural display, ever yet made in the state. Now would be an excellent time to revive the Hudson river Horticultural Society, and have it hold its show jointly with the State Society. All the late officers of the Society declined a re-election. Dr. John P. Beekman, Columbia, is chosen President for this year; Benjamin P. Johnson, Rome, Cor. Secretary; Henry O'Reilly, Albany, Rec. Secretary; Thomas Hillhouse, Albany, Treasurer. The State Society has $3,000 in the Treasury, over and above all its last year's expenses, which is a clever sum to begin the year with. We particularly regret the resignation of Mr. Prentice, as there are few better keepers of the strong box.

MANAGEMENT OF YEARLINGS.

To those who have the time to attend to it, we say, stable and tie up your yearlings, both steers and heifers; curry or card them at least once a day, and if you can afford them a few roots so much the better. Such treatment makes young cattle tame and docile, and you will have no trouble in milking them when they have calves, and if intended for family cows, they may be made to eat all kinds of slops and other rubbish from the kitchen. The steers also should be broken the winter after they are a year old, and for this purpose the farmer wants his small yokes, sleds, chains, and whips—the latter to be used very sparingly. Break steers well at this age, and there will be no trouble in doing it when they become oxen.

Our Subscriptions.—Three times as many subscribers have flocked in upon us this month for the Third Volume, as we received during the first month of our Second volume, and a large share of these we are glad to see are new ones. We are highly gratified at this flattering testimonial of our labors by the public, and hope to record at least Ten Thousand good and true names upon our subscription list before the close of the year. We trust our friends will continue to exert themselves on our behalf. Every present subscriber can get at least two more, and many might send us from eight to sixteen additional names.

Origin of Ayrshires.—Mr. William Aiton of Hamilton, in a communication made to the British Farmers' Magazine in 1826, Vol. I., page 149, says: The dairy breed of Scotland have been formed chiefly by skilful management, within the last 50 years; and they are still improving and extending to other countries. Till after 1770, the cows in Cunningham were small, ill-fed, ill-shaped, and gave but little milk. Some cows of a larger breed and of a brown and white color, were about that time brought to Ayrshire from Teeswater, and from Holland, by some of the patriotic noblemen of Ayrshire; and these being put on good pasture, yielded more milk than the native breed, and their calves were much sought after by the farmers.

In addition to the above, we were verbally assured when in England, by some old breeders who had known the Ayrshires since 1780, that they had received more or less improvement from crosses with Short-Horn bulls for the last half century, and although they may now be considered a good established breed in themselves, they are, in reality, merely high grade Durhams. Is there any error in this statement or not? If so, we shall be glad to have those who have made the origin of this breed more of a study than ourselves, give us any new information on this subject. We do not wish any reference to Youatt's account of them, as that is already familiar to the public.

New York Farmers' Club.—This Club held its regular meetings the past month, in the reading-room of the Repository of the American Institute, on the first and third Tuesdays at 12 o'clock, M., continuing them till 3 o'clock, P. M. They were both well attended, and the subjects of discussion were the disease in potatoes, adulteration of milk, lactometers, and subsoil plowing. All these matters have been so fully treated in our previous volumes, that we have not thought it worth while to give an extended report. The meetings will continue regularly, commencing at 12 o'clock on the first and third Tuesdays of each month. They are free to all, and no fee or ceremony of admission will be exacted. Gentlemen from the country are particularly invited to attend.

To Mechanics—Agricultural Implements.—We are constantly in the receipt of orders for the purchase of different kinds of agricultural implements, and the venders of these will find it much to their interest to forward us cuts of the same, accompanied with brief descriptions, and stating their prices.

Culture of Potatoes.—We beg attention to Mr. Pell's excellent article on this subject in our present No. He has left samples of his improved pink-eyes at our office, which can be seen by those who have any curiosity on the subject. They are of good size, have a smoother skin, and are freer from eyes than any we have yet seen. We are informed that they are very mealy and nutritious. Mr. Pell candidly states that they are rather *shy* bearers; but with good treatment, he seems to have made them satisfactorily *tame* in this respect.

Poland Fowls.—Those advertised for sale by Mr. Starr we know to be very superior. They are of the shining black kind, with very large white top-knots. To our eye they are the most beautiful of domestic fowls, and are such famous layers that other hens must be kept to hatch their eggs.

Agricultural Agency in London.—We desire attention to the advertisement of Mr. P. L. Simmons, No. 18 Cornhill, London, for books, periodicals, &c., &c. He has also commenced Simmons' Colonial Magazine, which is published monthly, price 2*s.* 6*d.*

The American Agriculturist Gratis.—Let it be remembered that any one can have a volume of our paper gratis by procuring us two subscribers and forwarding $2. The terms are Three Copies for Two Dollars.

How to Make Three Dollars.—Procure eight subscribers to this paper, receiving from them Eight Dollars, Five of which only need be sent to the publishers, to entitle the person so remitting to the eight copies—he will therefore have $3 remaining to put in his own pocket. Many persons might thus benefit themselves, and at the same time be doing a great good to the public. Agencies of other books will be given by the publishers with this paper.

Horticulture.—As prosperity is again restored to our country, it is satisfactory to perceive, that little comforts and luxuries are beginning to be attended to again. Among these, perhaps, some will class fruits; but our opinion is, that with proper attention to them, they may become something more than this, and in a few years be no small item of exportation to foreign countries. We believe few doubt that good ripe fruit is eminently healthy, and it is certainly proved so in the south of Europe, as many of the peasantry in certain seasons of the year almost entirely live upon it, and yet none enjoy a better state of health than they. The fruit culture is assuming a new aspect in this country, and we begin a series of articles on it, which will be regularly followed monthly through the year, by several of our friends who have been long practically engaged in the business. What they have to say, therefore, on the subject, will be entitled to the confidence of our readers. The growing of choice fruit in a proper location, we have repeatedly contended must for a long series of years be a good-paying business.

☞ Office Hours.—Owing to his avocations elsewhere, the editor of this paper will more usually be found at his office from 12 o'clock at noon, till 2 P. M., at which time he will be pleased to see all who may be desirous of favoring him with a call.

ORIGINAL CORRESPONDENCE.

STOCK OF PETER A. REMSEN, ESQ.

The western part of the State of New York has, for some years, possessed several large herds of cattle of great excellence. Among the largest and best for a long time, was that of Peter A. Remsen, Esq., of Alexander, Genesee county. This gentleman has, during the present autumn, removed with a large reserved lot of his herd as it stood in 1842, (having sold from it, as a draft, some one hundred and twenty-five head during 1842 and 1843,) to Maryland, where he proposes making his future residence. His departure to a distant state, and to a home among strangers, prompts me to a notice of himself and his stock, due alike to both, that his neighbors among whom his new lot is cast, may know how Mr. Remsen and his stock were valued by those whom he has left, and among whom for many years he and his family dwelt. The prize-list of the late State Agricultural Show has heralded his cattle abroad, and, of course spread their fame in advance of themselves to their place of destination. Their success, so widely known, carries with it a high recommendation; and this might render any notice unnecessary, had any agricultural paper, either of itself or through its correspondents, given any account of his herd, or had his imported cattle and their descendants been placed on record. This not having been done, allow me to do it, and at the same time, seize the occasion to speak of him as a man, as well as a breeder.

Mr. Remsen, although a northerner, was for many years resident in Alabama, and mostly at Mobile. Engaged largely in trade, he yet possessed and cherished a fondness for stock, the result of early occupation and education, and his wealth was used as a means of gratifying his tastes. In 1831 he purchased a large estate in Genesee county; it was most judiciously selected, just at the base of the hills which form the grazing country of the south part of the county, and at the head of the alluvial valley of the Tonawanda, covering both the valley and the last spurs of the subsiding hills. Here the upland has lost its exclusive grass-growing character, and is equally adapted to the production of hay and grain. Its position is commanding, giving views of great extent and beauty. From the uplands beautiful brooks of the purest water flow down in profusion upon the intervale. Upon it he erected a noble mansion, a fine feature in the landscape as viewed from the vale below, and looking down on that vale of beauty, each adding to the charm of the other. Here Mr. Remsen made his summer residence, and his family their permanent one. With an enterprise worthy of his means and his tastes, he ordered from England the nucleus of a herd of cattle. The commission was for the best, without limitation of price. The execution of the order was intrusted to Mr. Wilson, to whom it was given, to Mr. Samuel Scotson of Toxteth Park, Lancashire, a breeder, widely and favorably known. Mr. Scotson, through his friend Mr. Robert Thomas of Engholme, near Darlington, procured a bull and a heifer, bred by Mr. Maynard of Harsley Hall, Yorkshire. From Mr. Severs of Richmond, in the same county, was purchased another heifer; and to these was added a selection from the herd of Mr. Scotson, consisting of a young bull and a heifer. This importation was made in 1834. At a subsequent period, Mr. Remsen increased the number by a heifer from the herd of the Rev. Henry Berry, and a heifer from another source in England, which, however, died without produce. To these was added a selection of American bred cattle. With such materials for an origin, a herd large in number, beautiful, and choice, soon spread itself over his fine lawns, alluvial meadows, and swelling hills. At once, was Mr. Remsen among the first breeders of New York, indeed, of the country at large; and richly was the sagacious enterprise which created all, rewarded. His tastes were gratified, and his investment profitable; his pleasures and his interests at once coincident. An immediate demand sprang up, and so great was it, and so superior were even his grades, that he repeatedly sold them for prices as high as thorough-breds would command; and this demand continued until the present depressed value of cattle checked all desire and inducement to rear or acquire stock, either crossed or pure. In all this Mr. Remsen had a most capital assistant in his interesting wife. Like him she possessed a fondness for a rural life, for flocks and herds. Among them she found consolation for the absence of her husband, whose business yearly called him south, and for many months detained him there. In her he found a guardian to whom he could well intrust them, assured that a taste congenial, an interest identical, and a judgment scarcely inferior to his own, would be ever watching over and superintending them, and of course in his necessary absence during the winter, the care and direction of the herd were hers. As a proof of her good management and tact, I may mention that she frequently sold grade cattle, both heifers and bulls at prices as high as $150. Added to this business ability in Mrs. Remsen, were all the charms which render the woman and the wife interesting—amenity, frankness, intelligence, and polish. Is not this a wife indeed?

Among Mr. Remsen's selection of grade cattle in the formation of his herd, were some cows with a Devon and Short-Horn cross. They were the get, in part, of the fine Devon bull Holkam, bred by the late William Patterson, Esq., of Baltimore, from the herd of the late Earl of Leicester (formerly Mr. Coke); in part, of the Otto bull, a Short Horn; and, in part, the get of Holkam upon the cows got by the Otto Bull. From these Devon Short-Horns Mr. Remsen has reared oxen and steers whose equals are rarely, and whose *superiors are never found.* He has now a yoke of oxen six years old, (which received the first prize for working oxen at the State Show at Rochester), which have been worked every year since they were two years old, *and have never been fed* anything but hay and grass, that weighed 2,300 pounds each, in September last.

It would be useless and too prolix to attempt an enumeration of all his cattle, full-bred and grades.

His herd last year consisted of one hundred and sixty head. He has reduced it at present to about fifty choice and beautiful cattle, both pure and grade. A pleasure it is to see them—a pleasure it must be to own them.

Mr. Remsen showed a number of animals at the late show of the State Agricultural Society, as did other gentlemen, and in every instance save one, the cattle on the ground from his herd were winners of prizes; and the animal which did not win, was specially commended by the judges of his class. Here was a breeder's success and a breeder's honors, and his triumph was as grateful to his friends as to himself.

I give you a list of the thorough-bred cattle and their pedigrees. (*a*) A. S.

(*a*) We are reluctantly compelled to forego the publication of the pedigrees of Mr. Remsen's animals, so obligingly furnished us by our correspondent, for this reason: if we did it for *one*, we must do it for *all;* and it would thus be occupying more space in this periodical, of what properly belongs to a herd-book, than the general readers of the Agriculturist would feel was allowble. We hope soon to see a Herd-Book of American Short-Horns published in this country, for it has become a work much wanted.

What our correspondent says of Mr. Remsen's stock, it affords us great pleasure to add, from our own knowledge of it, is strictly correct. Mr. R. is now placed in a position to serve the south and west, and to all in that quarter we earnestly recommend his breeding. He has been long and well known at the south, and his address till the last of May, will be Mobile, Ala.

THE PEACH-TREE.

So MUCH has been written on the subject of the diseases of the peach-tree, but in reality to so little practical advantage, that it requires some assurance in any one to sit down to occupy the time of your readers on the subject,—yet we must take the naval motto, "Don't give up the ship." If nothing new should be set forth in this article, the writer hopes to correct erroneous opinions, and to present certain facts in relation to this tree, which may assist others to discover a better remedy for its disease than that recommended.

The peach is *Icosandria Monogynia*, and can be worked on the wild and domestic plum, cherry, and almond. It is supposed that the peach is produced, by culture, from the hard-shell wild almond. So far as relates to the stock, the domestic plum appears to suit the graft or bud. The writer has tried the wild-plum stock—the trees in the instance referred to did not grow thriftily. He has young peach-trees worked on cherry-stocks, apparently doing well, the peach part is of no unusual appearance.

In considering our subject, we start with this fact, that from the earliest tradition, we hear of the peach in our country; it was the most abundant and the most prolific of the fruit-trees in the states of New York, Connecticut, New Jersey, Pennsylvania, and the adjoining localities. This abundance of fruit continued in eastern New York until about 1812 or 1815, when the trees began to decline, and have continued to decline, until they may now be said to be extinct, as bearers, in at least some of the referred-to localities. In its former state of healthful growth, it was to be seen in the richest grounds; in all soils and situations; occasionally taking an accidental position, amid thorns and briers on the side of the blind walls of some neglected farm; and sometimes in the tough sod of the highway. They grew as food for man and for swine,—neither were stinted.

A full-grown healthful peach-pit, planted in the fall, grows four feet high its first year, with a smooth, bright-yellow bark, and green foliage. The second year it grows well also, and the only thing to be discovered is a small worm (called in popular language the peach-grub)* at its root, about an inch below the surface of the ground. The wound made by the grub is hardly perceptible, but its presence is traced by a small quantity of gum, colored red by the gimlet-like borings of the insect. The grub, if neglected, the third year will have girdled about one quarter of the bark of the tree; but the tree will not show, in its leaves, any disease—on the contrary, it will blossom and produce a dozen or more of good peaches. The fourth year the grubs continue their borings of the tree, perhaps one third of the bark near the surface of the earth is girdled; but the tree is slightly affected; the leaves in May and June, become red and blistered, and curl up, and some of them *collapse;* yet the tree will not be injured externally, so as to destroy the fruit, though many of the leaves will show a light *yellowness*—in fact, a good crop may be taken this year from the tree. The fifth year, the grub, if neglected, still continues to girdle the tree, and in particular places, one half the bark is destroyed; but this appears only to wound, not poison the tree, for in instances where the worm has been destroyed, and the dead bark removed, the trees soon recovered from these *mechanical* injuries. This (fifth) year, the leaves of the tree become *all yellow*, and one half the fruit, of which there will be a great quantity, will ripen prematurely and fall: some few will remain on the tree and become passable. But the tree dies of the *yellows*, not of the grub. It appears to the writer that the disease of the peach-tree is *sui generis*, and has no connexion with the injury produced by the grub; no other fruit-tree that the writer knows of, dies in the same manner, or at least with the same appearance. With other trees, the injury is mostly, if not altogether, externally obvious: the curled and blistered leaves appear peculiar to the *yellows*, at least among the garden-fruit. Mr. Cox, in his most valuable treatise, though an old one, describes the *yellows* as the malady which destroys much the largest portion of the peach-trees, and that it has hitherto baffled every effort to prevent it.

As far as the writer knows, no tree in the United States, or elsewhere, has become so universally fruitless and short-lived. The doctrine is no longer believed in England, that all the grafts of particular kinds of fruit have died, so we can not account for the disease of the peach on any similar principle. Our summer and fall pears do well, though the vergaloos, and some other varieties, have for several years failed, yet they appear to be recovering; but of peaches *all* may be said to have failed in this locality.

It must be one of the causes enumerated below, which produced the disease in question.

First. Some sickly tree must have been imported, or some deleterious locality must have produced the disease called yellows, (I know of no better name,) and by its contagious qualities, disseminated itself throughout the country, like the small-pox, and other contagious diseases. Some sensible nursery-men, in the state of New York, would as soon have a case of yellow-fever in their nursery of children, as a tree infected with the yellows in their nursery of trees. To be sure, nothing similar in the vegetable kingdom is known; in fact, the death and corruption of seed, and the decay and rottenness of the tree, are the food of their progeny. But if this doctrine be the true one, we may have some relief in quarantine laws and sanitary regulations as to the transportation of trees. Trees and plants might be smoked, as, in some countries, they smoke letters!

Gentlemen who believe in *contagion*, recommend immediate removal and destruction of the diseased tree. Now this ought not to be objected to—for a new tree can be so easily procured—except that this plan abandons all idea of a remedy. They should, at least, leave some of them to be subjected to experiment. We dismiss the above position, and call upon its advocates for the reasons of their belief.

Second. The next possible cause of this disease, we enumerate the climate, including changes of weather, warmth, rain and drought, frosts, and easterly winds. Many intelligent persons attribute the disease of the peach to one or more of the causes above mentioned. In confirmation of this, might be quoted the European opinion, that frost has at several different periods killed the sycamore, and it is said in the United States, that the American sycamore was killed in 1841 by frost; and well-informed persons think this tree since 1841 has continued to be affected, especially in the state of New York, by frost.

Now I enumerate the following reasons as conclusive, in my mind, against the theory that frost has anything to do with the *yellows*, or the general declension of the peach.

Our climate has not changed, but is the same as it was when the peach produced abundantly. Neither tables, nor tradition, represent any material alteration; to frost we have always been subject. The peach is not a tender tree. The October cling-stone is frequently in fine health, and with fruit on, long after the frost, when all the potatoes, all the melons, peppers, beans, &c., are cut off. The apricot, and nectarine, which come forward and bloom before the peach, grow well in the gardens in our cities, and in the country, when well protected, and give abundance of fruit. Now if frost was the evil, these trees, particularly those protected, coming out first, and liable to the same *frosts* as the peach, should blister up and die with the yellows.

In an account of the spring of 1836 on the Continent, in one of the British magazines, the loss of the crop of grapes, pears, apples, &c., from an untimely frost, is mentioned, but it states that the *peach-trees* never looked finer.

Again, is it reasonable to say that although for a hundred years the peach-tree bore without being affected by frost, yet for the last thirty years there has regularly been a frost each year sufficient to destroy the peach-fruit, and kill the tree? The state of the atmosphere, easterly winds, &c., are all about the same as when the peach-tree was in perfection, no material change is alleged by anybody. We therefore dismiss all these doctrines, and adopt the only rational one in our judgment; that the *yellows* in peach-trees is produced by insects. To prove our position, we shall mainly refer to written authority of the most valuable character.

Mr. Keen, the great English gardener says, that "in 1834, when the blossom-buds of his peach-trees were as large as hemp-seed, a solution of lime, sulphur, and soot, was thrown on his trees, and not a single blistered leaf was to be seen." Now it is believed that the blister of the leaves is an invariable precursor of the *yellows*. The soot and sulphur would not keep off frost.

The American Orchardist, a Boston work, represents the curculio (the grub-worm) as the great enemy of the peach. The author says, "he never saw the *yellows* in New England." Now New England is less subject, from the cold, to insects, and more liable to injury from frost, and yet according to this authority, there is no *yellows* there. New York, and the states adjacent, may have produced insects unknown in New England,—though the writer believes that the *yellows* is in New England, and the insects producing it, too. The statements hereafter, although they tally (and on that account this article has been written) with the experience of the writer, yet the main facts and opinions expressed are from the most modern European and American authorities.

The aphides, or plant-lice, are the enemy which produces the *yellows*, and destroys the peach-tree. This family of insects embraces a great variety. The apple-louse, the cabbage-louse, rose-louse, and willow-louse, of popular designation, for they are best named, for our purpose, by the particular tree or plant selected as their domicil. These different kinds of lice subsist, sometimes on the roots, particularly the cabbage, and among flowers, on the roots of the asters, but on the peach they attack the leaves, bark, and tender twigs. The apple-louse commences at the surface of the ground, attacking the different parts of the tree.

Curtis, in an excellent article in the Journal of the Royal Horticultural Society, remarks, that there is no tribe of insects so universally distributed, or exceeding in multitudes the plant-lice; that probably there is not a plant from the smallest grass, to the most stately tree, that is altogether exempt from this pigmy. Linnæus considered every plant supported a distinct species of louse, and some plants are attacked by three or four species of lice—they multiply beyond all calculation. From an egg, in one season, 729 millions are supposed to be created. They make their appearance so quickly and in such myriads, as to be termed a blight, and their numerous appearance directly after a thunder-storm, has led to the vulgar supposition that they come from the clouds.

Professor Harris says, "These insects are one of the causes, if not the *only cause*, of the peculiar malady affecting the peach-tree in the early part of summer, called the *blight*," which is no doubt the yellows of New York. Rieamer, a French author, observed the ground quite moist under peach-trees infested with bark-lice, which was caused by the dripping of the sap from the punctures made by the insects. These little insects are most easily examined on the rose-bush. The varieties are very numerous. In the green-house, two or three weeks will produce a generation, and one parent, in one season, will produce several millions. The authority above referred to, states that eggs are laid by the winged-lice in the fall on the trees, and that they hatch in the spring only females without wings, and that *these females*, without the presence of the males, give birth to several generations! (not produced by eggs.) But the male being winged, and the two modes of creation being at variance with nature, the writer thinks the statement in the latter particular, doubtful. The facts, however, show how numerous these insects are, many of which can not be seen with the naked eye. These lice have a proboscis with which they perforate the tender bark and leaves, and suck up the sap, which they exude in great abundance by *two vents*, which exudation is called honey-water, which the ants devour so greedily, that the lice have been called the milch-cows of the ants, who even rub them down, being good farmers, to make them increase the quantity of honey-water.

If the lice only eat enough to support them, it might be said that they did not take enough sap to kill the tree; but they appear to pump it up for the ants, who in different ways, return the obligation. It is not only the quantity of sap they take, but they poison and corrode the remainder, thus stopping up the pores of the bark, and making the tree send out shoots in unusual places, and of an unhealthy character. One who has felt the bite of a louse or a musquito, or has been stung by a hornet, or seen the like or similar insects madden the horse, or considers that a cow, by her milk, will feed a dozen children, but dies in sustaining a quarter of an ounce of lice, will readily suppose a tree would be killed by the parasitical attacks of lice. The eggs of the apple-louse can not be seen but with a microscope, and are to be found in the covering of the bark, in a knob, or cotton-like enclosure, and when full-grown, are but one tenth of an inch in length.

In the 49th article on Entomology, the best of English authority, the Gardeners' Chronicle, we are informed that the little animals stick to the bark of apple-trees, and are similar to mussel-shells. Gamelin calls them *cocus conchiformis*—the scales sometimes lie one over another; they are hard, dark, and shining; they adhere firmly to the bark; they appear woolly. In these scales, a fleshy green female is found, and a part of the shell or scale filled with 40 or 50 eggs. Out of these, proceeds a fat yellow-green maggot.

In an article from the London *Gardeners' Magazine*, another scale is described, of a brown color, pointed at both ends, and *less than half the size of the seed of the common flax*. Sometimes found on the apple itself, the same scale it is said, is prevalent on the peach-trees. It is also alleged by the same authority, that peaches, apricots, and plums, suffer from the attacks of the *mussel-scale*—that these insects migrate from one tree to another—that standard trees are seen covered with the mussel-scales, the trees become hide-bound. They are so minute that you must use a microscope to see them, when in April they first move out.

The apple-trees in England have been most extensively injured for the last 20 years; for nearly the same period, the locust, pears, apples, peach, and quinces, and particularly plums, have greatly failed, and some kinds will not perfect their fruit at all on Long Island. How is this to be accounted for, but by insects? The locust of Long Island was free from borers, and a most valuable timber until 20 years since—now it is worthless.

Forests and new countries have few insects; with cultivation and emigration they, like the birds and quadrupeds, are introduced. The horse now roams wild over the southern forests of this continent. The Norway red-rats have come too, and not content to live here in fellowship with our blue-rats, have killed or driven them from the Atlantic border, toward the Rocky Mountains. Since these things are so, it is not difficult to suppose that as our seeds, plants, and trees, and wrapping-straw, (brought in great quantities from abroad,) have introduced the new vermin and insects of the last 20 years. The tradition is, that the German soldiery of the Revolution, brought the Hessian fly (in the bed-straw) which killed the wheat in New England. But having got the insects, the important point is, how shall we get rid of them? I recommend to begin by quarrelling with their friends. S. S.

(To be Continued.)

HARDINESS OF DURHAM CATTLE.

I HAVE waited until the experiment was fairly tested, to let you know the result of our introducing the Durhams into our "terra nimbosa," and changing their feed from cultivated English pastures, to our trackless prairies and rush-beds. It was generally supposed that our experiment would be a failure, and that the six months winter and prairie hay would thin their ranks. We selected fifty odd individuals from Mr. M. L. Sullivant's, of Columbus, Ohio, extensive and well-improved herd, and drove them on in September; they were chiefly young heifers, and three or four young bulls, descendants of Cornplanter, Talleyrand, Red Jacket, and Niagara.

The winter set in remarkably early, before they had had time enough to recruit from their long journey. We erected temporary board sheds to protect them from the winds, which are remarkably severe from Saginaw bay; no forest intervening, they come in full force upon us. The winter being so unusually severe, the provender throughout the state failed in March, while the snow was two feet deep. Ours failed with the rest, and we were forced to chop down basswood, elm, and soft maple trees for them to browse on, every now and then giving them a bite of hay, to form their cud. This state of affairs lasted until the last of April, when spring once more showed her smiling phiz. Yet they were in good order, while cattle of the scrub breed were dying all through the country. And this fall they are quite fat, and our calves are beauties.

I find them greatly *superior* on account of the *extra brisket-piece* and larger rounds on the quarters, for the packing business, which is destined to be *the business* of our prairie country. The farmers have become convinced of the superiority of the Durhams for the beef business, and their better adaptation to the rich growth of the prairies, and we trust that in due time they may take the place of the inferior cattle of the country.

Our Leicester sheep do well; the ewes yielding 6 to 7 lbs. of good wool, the wethers 8 to 9 lbs. We hope, by judicious breeding, to improve still farther our cattle and sheep. We have some good Berkshires in the neighborhood, originally from Mr. Bement's farm. D. B. BIRNEY.

Lower Saginaw, Mich., December, 1843.

HEREFORD CATTLE.

DAIRY QUALITIES.—I send you the result of my dairy, but it will not be any criterion to judge of Herefords, although the actual weight is taken from the book of Mrs. Sheldrick, who has kept a correct account of every pound. You were aware of the situation I was in when you visited me last season, that I had no dairy to keep my milk in until the 1st of March, therefore I could not make any butter during the month of February from six cows, three of which calved in January. Notwithstanding this, I send a true statement, although small.

There were nine three-year-olds, two four, and one seven, the month of March. I sold Cherry, a three-year-old heifer, on the 2d of April; from that time until the 1st of October, I milked eleven, at which time I sold my milk to the milkman at 2½ cents per quart.

From March 1st to October 1st, butter	1,456½ lbs.
35 cream cheeses, 3 lbs. each, equal to	105 "
113 quarts of cream sold, equal to	113 "
	1,674½ lbs.

My first cow, Lucy, four years old, calved November 28th, and made last week, 8 lbs. 2 oz. of butter; this is the only cow I am milking, therefore I have every reason to believe the Herefords will do more next season. I am open to inspection at any time, and I will not make any scruple to any respectable judge. I shall be perfectly satisfied if I can make from 6 to 8 lbs. each for nine months, nor shall I want to change the Herefords for any other breed for milking.

I quote from the Mark Lane Express the following remarks from the speech of Fisher Hobbs, Esq., October 23, page 11:—

"He could not, however, conclude without making a few observations as a successful candidate. It had frequently been his good fortune to appear before them in that character, but he never felt so much pleasure from the circumstance as on the present occasion; for it must be admitted on all hands, that, except in a few instances, the competition was very good indeed, and in some cases very severe struggles. He was the more happy as a great victory had that day been gained for a breed of cattle for which he was a strong advocate. He did not think, as judges were generally prejudiced in favor of Short-Horns, that Herefords could have been so successful as they had that day been. When he first became a farmer he was determined to have a good breed of cattle. He first tried Short-Horns, because he thought they were the best! and at a sale in Suffolk he purchased several, better than which could not be obtained. He also purchased some Herefords and kept them together for twelve months, and the result was most decidedly in favor of the latter. He was therefore compelled, contrary to *his own wishes*, to give up the Short-Horns and take to Herefords, and he had from that time continued to do so, being satisfied that with his soil and climate they paid the best. [Hear, hear.] He trusted the farmers whom he was addressing would do as he had done, and judge for themselves what description of stock was best suited to their farms; and when they were satisfied that they had a breed which would prove most profitable to them, he would advise them to keep them, and if they came here to exhibit them, and were occasionally unsuccessful, he would urge them to go home with a determination of meeting with more success on another occasion. [Cheers.]"

Mr. Hobbs gained the first premium as the best cow in *milk* of any breed with a Hereford. What will Youatt and his followers say to this? let us *hear* from them. Again I refer you to a sale of Herefords, page 12, October 30, the property of Mr. John Hewer.

"An in calf, cow Lady, by Chance, was knocked down for 100 guineas, ($500.) Two-year-old Victoria, 87 guineas, ($435.) Yearling heifer, 40 guineas, (or $200.) An aged bull, Dangerous, (the sire of some of my heifers,) 100 guineas. Lofty's bull calf, 51 guineas, and several others at similar prices."

What does this say for Herefords? *Does it not prove that some writers know nothing about them,* and will it not teach some of them to *search for facts* before they *abuse* the Herefords? I refer you to a sale of an excellent herd of Short-Horns, the property of Mr. Rogerson of Algarkirk, page 12, October 23. You can make your own statement. (*a*) It is by such comparisons that we arrive at *truth*. I do not think that breeders in this country are willing to pay a remunerating price for a good animal; the butchers have far more spirit, and my object in future shall be to serve them. If they want this stock let them go to England and fetch them, they will then know their true value; at present I intend to make steers of all. Nor do I intend to show another animal in this country for a premium as long as a combined prejudice exists.

William H. Sotham.

Hereford Hall, near Albany,
December 6th, 1843.

(*a*) As our Mark Lane Express is not at hand, we can not quote the prices of the Short-Horns to which our correspondent refers. We can say, so far as our acquaintance extends, that there is every disposition to do the Herefords even more than justice; and we hope that Mr. Sotham will not regard the expressions of a few, as the opinions of the public in general. We know that several of the Short-Horn and Devon breeders much regretted that Mr. Sotham did not exhibit his stock at the State Show at Rochester last year, and they will be more disappointed, as well as the great body of the farmers, if he do not appear in strong force next September. We hope the Society will have the fairness the present year to class the different breeds by themselves, and not put Herefords, Devons, and Short-Horns, as heretofore, against each other. They might with as much propriety arrange Cotswold, Merino, and South Down sheep in one class.

THE WHEAT OF TAOS.

Allow me, through the medium of your journal, to direct the attention of agriculturists to a very peculiar kind of wheat to be found only in New Mexico, at least so far as I have been able to ascertain. I allude to the wheat of Taos, which is a small hamlet situated in a deep, narrow valley, between lofty ranges of mountains 60 miles north of Santa Fé.

The peculiarity of this wheat consists in the plurality of heads or ears, differing from our common wheat heads only in size, being a trifle shorter, and thicker, but equally well filled out. The berry is quite as large, the flour as white and good as the wheat cultivated in this country. The stalk also is stronger and thicker, and but a very few inches shorter. About eight inches below the top and immediately above a joint, a small seed-stalk is sent out two or three inches long, terminating in a head or ear. At a proportional distance, say 1½ inches above the first seed-stalk, another is sent out in the same manner as the first, and so on continuously for six heads; the main stalk or straw terminating also in a head like the common variety. It produces in all seven heads or ears of the same size and character. By the Mexicans it is generally distinguished from the other wheat as *El trigo de siete espigas*, (seven-headed wheat.)

The stalks on a field of this wheat, appear to a casual observer, to be nearly as thick as other wheat; but as this condition, with its multiplied heads, would have produced something like five times the quantity of an ordinary wheat-crop, it is probable that it stands much more scattering. I am satisfied, however, it produces much larger crops than other wheat, and that it is well worthy a trial by our American farmers.

I procured about a pint of the seed, which I took with me on my route to California, but which I subsequently lost on my perilous journey, or perhaps it was consumed amid the extremity and privations to which we were subjected.

Mr. George Gold, a raiser and distiller of wheat at Taos, above, is the first person who directed my attention to it. From him, the seed can probably be procured, through Mr. John Scully of Santa Fé, who is well acquainted with Mr. Gold.

J. H. Lyman.

BUTTER-MAKING IN ORANGE COUNTY.

I have delayed until now a compliance with your request, to furnish to you a statement of the progress of butter-making, as pursued in our county, with a view to obtain from a number of our best butter-makers, the details of their process. As the statements received do not materially differ from each other, or from my own mode of proceeding, I shall give you that.

The Milk-Room.—It is all-important that this should be *cool, dry, and moderately light*, with a *free circulation of air*. Mine is in the cellar of my farm-house, ventilated by means of two windows about two feet square on the north side, and a like window, and a lattice-door on the south side, all covered on the outside, with wire-gauze, fine enough to exclude the flies. The floor is formed by a layer of small stones, six inches deep, well *grouted*, (that is, a mortar of lime and sand, thin enough to run freely, is poured upon the stones until they are entirely covered with it,) and when dry, a thin covering of water-lime cement is put upon it, and made smooth with the trowel. This costs little, if any more than a plank floor, and effectually keeps out both rats and mice; and as water does not injure it, it is easily kept perfectly clean and sweet. The milk-pans stand upon marble slabs, raised upon brick-work, about two feet from the floor, and the butter is worked upon a marble table. A pump is placed at one end of the room, bringing the water through a lead-pipe from the bottom of the well, and the water discharged, runs the whole length of the cellar in a channel prepared for the purpose, when the floor was cemented, and escapes through a fine iron grate, cemented into the floor, over the mouth of the drain. The churn stands in the milk-room, and is worked by a dog-power machine, on the outside of the building. The milk-room should be used exclusively for dairy purposes.

Dairy Utensils.—The cows are milked into wooden pails, not painted on the inside, and kept perfectly neat and sweet. They must be thoroughly cleansed, dried, and aired, morning and evening; and never be used for any other purpose. The pans should be shallow, with sides much more slanting than the usual pattern of pans which we see at the tin-shops, and be kept as bright as silver; they also must be well aired in the sun.

The Milk.—This must stand in the pans, *undisturbed*, until the whole of the cream has risen; (some of our best dairy-women say until it is "*loppered*," or thick,) both milk and cream are then put into the churn together, at a temperature of about fifty-five of Fahrenheit; the churn is then worked with a rapid stroke, say from 60 to 75 per minute until the butter "begins to come," when the brake is put upon the wheel, and the churn is worked more and more moderately until the butter is entirely separated from the butter-milk. Upon taking the butter from the churn, it is washed with cold water, salted, and thoroughly worked with a *wooden ladle*, upon the marble-table. It must never be worked with the hand, as the warmth of the hand will injure it. It is then set aside in a cool place, until the next day, when it is again, in like manner, worked until every drop of the butter-milk is extracted. It is then fit for packing away, or for use. The butter must at no time be allowed to get soft. Fredk. J. Betts.

Newburg, Dec. 12th, 1843.

GRAVEL IN ANIMALS.

It is now more than one year since I discovered something wrong with my bull Yorkshireman, and having lost a fine ox some years ago with gravel, I was not long ignorant of what was the matter. I accordingly applied to a regular physician, who directed 1 oz. of juniper berries, ¼ oz. of box leaves, and ¼ oz. of pearlash, to one gallon of water. After using four portions of that prescription in one week, I gave him several bottles of harlem oil, together with about two gallons of honey; after which I gave him 1 oz. of pearlash daily for a considerable length of time. For several days after I commenced doctoring he was extremely bad, frequently clambering with both fore feet into his manger, then moving swiftly from one side of the stable to the other, and switching his tail furiously at the same time, appearing to use every effort to water, but frequently to no effect. Having caught his water frequently, I discovered a piece of gravel near twice the size of a grain of wheat; it appeared to have been broken off from a larger piece. By degrees he gradually got better, and I have seen but little symptoms of the complaint until a short time ago, when I again commenced using pearlash. I have been thus particular in giving this account, in hopes if any one should have a case of the kind, they may, if they think proper, try the same course of doctoring. It is said the gravel is not always produced from the same cause, but medical men are enabled to judge of the cause by the color of the gravel.

Last spring I lost a yearling buck lamb. It was noticed for a few days to droop about, when one of my boys who had the care of them concluded that it had the gravel; but as I had never heard of an instance of the kind in sheep, I did not suspect that it was gravel. I gave it a dose of some simple medicine, when it immediately died. I examined it carefully, and as soon as I opened it discovered the neck of the bladder was burst open, and a large portion of bloody water among the intestines; but it was not until I had opened the penis with a sharp-pointed knife to the extreme end that I found the cause, which was a piece of gravel about the size of a grain of wheat. In the ox that I lost, I found two pieces of gravel in the penis wedged in alongside of each other, more than half way along it. They were as large as small-sized grains of coffee, and about the shape. Had I known previously how these two were circumstanced, I might in all probability have saved them both. I think by having a record of all such circumstances to refer to when cases of the kind occur, there would be a great advantage in it.

Joseph Cope.

Kirkleavington, Pa., 20th of 1st mo., 1844.

BUCKTHORN HEDGES.

Rhamnus catharticus.—This beautiful shrub was first used in this country for growing live hedges, by Mr. E. Hersy Derby, of Salem, Massachusetts. He first commenced propagating it by cuttings in 1806, from an individual tree which stood in the venerable Dr. Holyoke's garden in that town. Since that period up to the present time, he has constantly multiplied the species by cuttings and seeds, and independently of ornamenting his own grounds, he has sent plants and scions to nearly every state in the Union. He has at present for sale at his nursery, several thousand vigorous plants at $3 per hundred, with a reasonable discount where large quantities are purchased.

This shrub flourishes best in rather a moist soil, although it will thrive in any soil that is adapted to the culture of garden vegetables. It is exceedingly valuable for live hedges, on account of its being able to resist any degree of climate in the United States, and of sure growth whenever transplanted. It remains green many weeks later than the English hawthorn, and in the vicinity of Boston, retains its foliage long after the fall of snow. In consequence of its medicinal properties, it is not attacked by any insects, nor devoured by any of our domestic animals.

The following cut will show a pleasing mode of growing a hedge in front of a dwelling, or enclosing ornamental grounds. As the plants will grow to the height of twelve or fifteen feet, they may be trained over an arch or trellis, and form a beautiful, densely-shaded arbor or walk.

Buckthorn Hedge.—(Fig. 6.)

It is preferable to set out the hedges in trenches from three to six inches deep and eighteen inches broad. The plants may be arranged in two rows ten or twelve inches asunder, and set six or eight inches apart, placing those of the second row opposite the centre space of the first, thus:—

● ● ● ● ● ● ● ● ● ●

● ● ● ● ● ● ● ● ● ● ●

When the hedges have acquired a proper height, they should be kept well trimmed, and if desirable, they may be cut into fanciful figures, which the English call *topiary* work.

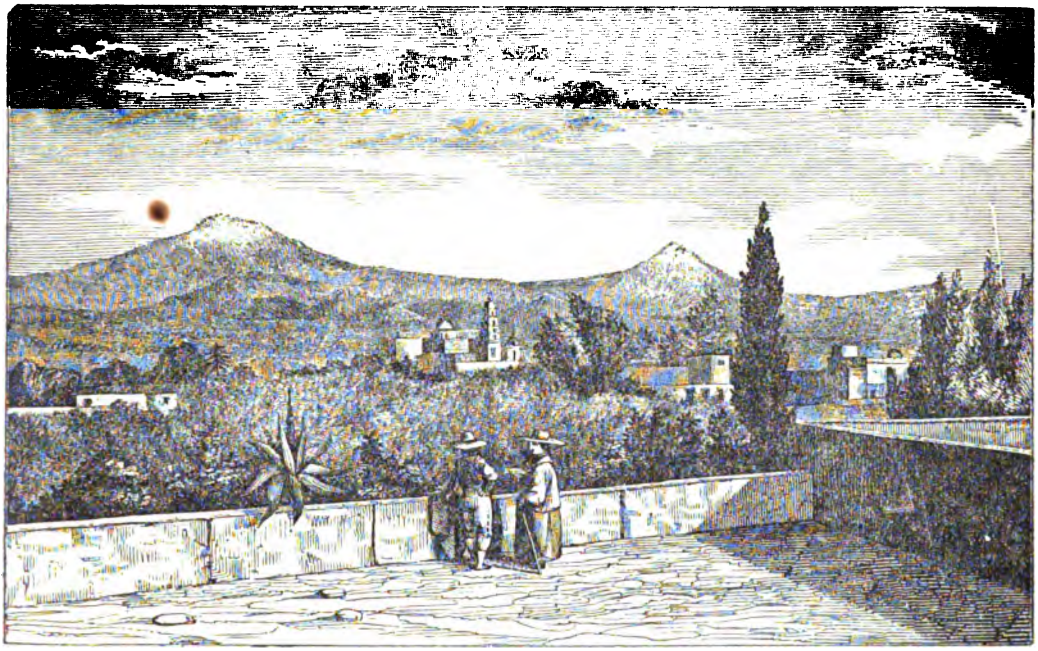
The plants for one rod of hedge set in two rows, and six inches apart, will cost about $1, when bought at $3 per hundred, and will last half a century and upward. B.

A MEXICAN FARM.

As we were disappointed in getting some cuts finished in time for this No., we are obligingly furnished by Mr. Winchester, the publisher of Mexico As It Was and As It Is, with a sketch of a farm and volcanoes in the distance, in this surprisingly rich agricultural country. The vicinity and part of the ascent to the volcanoes is thus described:—

The southern slope of Popocatepetl appeared to offer our travellers the easiest ascent, and, accordingly, having obtained three Indian guides from the Alcaldé, and an escort of two soldiers, for the wilds of the forest, they set forth on their perilous journey early on the morning of the 22d of May. Their way led through a tangled wilderness of plants and trees. After passing a number of barrancas, the sides of which were covered with beautiful pines standing out in relief against the bright snows above them; and being compelled to cut a way through the matted forest with their swords and Indian axes, they reached, about noon, the rancho of Zacapalco. The owner was absent from home, but they found the extensive pasturages round his house filled with cattle, and protected by a guard from the wolves and lions with which the woods are infested. As there was no one in the dwelling to make them welcome, they took the liberty to help themselves to the grazier's utensils, and dined most comfortably at the upland farm. The air was chilly, and respiration had already become difficult.

THE VOLCANOES FROM TUCUBAYA, AND A MEXICAN FARM.—(FIG. 8.)



After their meal they bade farewell to part of their company, and with the Indians and two servants, continued their upward course on horseback, notwithstanding the increasing heaviness of the sand. In two hours they attained the limit of vegetation, when they saw but a few pines, whose gnarled and twisted branches exhibited scarcely a sign of verdure. At this spot our travellers found a wide desert of black volcanic sand, covered with fragments of pumice. The volcano lies about 60 miles from the city of Mexico, and after Chimborazo, is the highest peak on this continent.

Some small singing-birds flew by them, and the plants they had observed in the course of their ascent thus far were the salvia, baccharis, acacia, cestrum, asclepias, iresine, arbutus, eupatorium, hedyotis, viburnum, corœpsis, myosotis grandiflora, myosotis flor. alb., stachys, lobelia, stevia, leonia-salvifolia, œnotera, fuchsia, and achyrophorus roseus. Those nearest the limit of vegetation were the chelone gentianoides, amaryllis minuta, phælia, castilleja, lupinus-vaginatus, ribes odoratum, and arenaria bryoides.

THE BEST SHEEP COUNTRY.

In reply to the inquiry of *Americus*, in your April number, of "Where is the best Sheep Country?" I will answer, by giving as correct a description of the southern portion of Mississippi, with my limited notions of sheep, as I can.

This state borders on the gulf of Mexico about 90 miles, a sandy pine-wood country. The coast is indented with numerous bays and tide-water bayous, which carry the salt water far into the interior, in every direction useful for stock, and convenient for navigation. From the gulf coast for 2 to 6 or 8 miles, the country is generally quite level; lying, as it were, in waves of dry, sandy ridges, and slow-running branches, parallel with the seashore; these dry ridges occupy about two thirds or three fourths of the surface. On this kind of land I have had a small flock of 60 head of sheep for about a year, and they have done well, without any appearance of disease of any kind. After leaving this level tract of country, the land becomes rolling and hilly, and continues so for an average of 100 miles north, with an equal, or greater width, from east to west, extending into Alabama and Louisiana. This whole tract of country is covered with the long-leaf pitch pine; near the seashore mixed with live-oak, magnolia, holly, sweet, red, and white bay, cedar, water oak, wild peach, myrtle, and a great variety of small shrubs, all of which are evergreens; and all the above tract of country is well covered with a great variety of our evergreen timber and shrubs. The whole of this tract is filled with the purest free-stone water, with an immense water-power on the numerous living streams, fed by innumerable springs. This whole section of country has long been celebrated for its great capacity to sustain immense herds of cattle, winter and summer, on its native grass, which covers the whole face of the country, and *reed-brakes* about springs and branches, but the "goose has been killed for her golden egg." Their stocks were increased beyond the capacity of the country thus to sustain; the reed-brakes are mostly destroyed, or so seriously injured that the business of marking, branding, and selling cattle, does not now make men rich as heretofore, and many of these stock-raisers are giving more attention to the cultivation of the soil. This destruction of the native range for cattle, is a necessary preparation of the country for grazing sheep and goats. Instead of the reed which subsisted the cattle in the winter, sheep and goats prefer browsing on the evergreen twigs, briers, and a thick woolly-leaved plant that covers the whole country. Besides, our native grass shoots up young spears all winter, under the dead grass, near the ground, which sheep will gather and subsist on, when cows would starve. Neither sheep nor any other kind of stock require salting within 25 or 30 miles of the seashore. Our whole winter of cold, bad weather, all crowded together, on an average, would not equal the average of your month of November alone. Our first killing frost generally comes between the 20th and last of November, and our last from 1st to 10th February, crowding what little winter weather we have into the short space of between two and three months, and often less than two.

I believe there is now no doubt that as fine wool can be grown in this latitude as any other; neither is there any doubt about the capacity of this country to raise grass for grazing, perhaps equal to most sections of the United States, particularly the Bermuda, so well adapted to sheep. Any quantity of turneps, carrots, ruta-baga, &c., for fatting sheep in winter, can be grown here, on lands manured by penning sheep on them the previous year; but so far, we find our mutton and lambs very fine, killed directly out of the woods.

Perhaps nine tenths of the whole tract of country is what may be called a dry, rolling, and hilly upland; no mud, and with fresh, pure water everywhere convenient. If, then, these advantages of situation, water, and climate, with abundance of food, constitute this "the best sheep country within the limits of the United States," I will endeavor to prove that it would be a more desirable and profitable business here, than any place north of this.

1. There is no part of our Union which will compare with this in point of health, all the year round; this I consider so perfectly a settled question with all who have taken the pains to examine it, that it will neither be doubted nor denied. 2. Our mildness of climate, alike free from the extremes of both the heat and cold of northern summers and winters. Our delightful seabreezes, tempering the effects of a southern sun; free from mud in winter, and dust in summer; and all our annoying insects put together are not so bad as the house flies of the north, which we are almost entirely free from here. 3. Our convenience to New Orleans and Mobile, two of the best markets in the world for lamb and mutton, from which we can get advices of the market every day, and being always on the alert, be in market the next, with whatever we have to sell; besides the convenience and facility of shipping wool to any point where we can find the best market, and last, though not most unimportant, the great water-power throughout this whole country; mildness of climate, cheapness of living, and comfort while we do live, and unsurpassed health of our whole coast, all conspire to warrant the belief, that manufactories of cotton and woollen goods will soon be started in this region of country, sufficient to consume all the wool that can be raised. A home market always being the best, will add another strong argument in favor of growing sheep and wool in this section of country. The capacity of the country on and near the seashore to raise sea-island cotton to advantage, and that of the country further back to produce the Mexican cotton to any desired extent, would thus supply all the raw material, without expense of transportation, and at the same time open a market for the manufactured article of the same desirable kind.

I may at some other time of more leisure, give you my opinions of the great advantages I consider the country possesses for tanning; manufacture of shoes, boots, saddles, and harness, hats, glass, silk, tar, turpentine, rosin, &c.

However much I may be mistaken about the advantages and capabilities of this country, my opinions have not been hastily formed, nor without a tolerable share of practical observation, embracing a pretty wide tract of country from a little north of Boston to a short distance within the tropics; and after all I have seen, and some I have tried, I am perfectly satisfied that *here* a man can enjoy more of those great objects of rational pursuit in life, *health* and *contentment*, than at any other place I have known. Our country is sufficiently productive, and resources sufficiently numerous, to gratify all our rational wants with only that degree of labor which is essential to our mental and physical comfort, and too poor to excite those feelings of avarice that derange so often the mental, moral, and physical harmony of our organization. While we are removed on one side from that lassitude, ennui, and muscular relaxation, of a tropical climate, we are equally protected on the other from the severity of the northern winters, the cause of much severe pain, besides the mortality produced in colds, consumptions, rheumatisms, &c., equal, perhaps, to the bilious fevers of the *malarious districts* of our southern climate.

But I have digressed—I intended only to give you my opinion of this, as a sheep-growing country.

JOHN J. MCCAUGHAN.

Palmetto Farm, Mississippi City,
December 1st, 1843.

BUTTER FROM SOUR MILK.

As many of the farmers in Orange county, and elsewhere, are in the habit of churning their milk sweet, and fresh drawn from the cow, as our correspondent thinks is the best method, we should be glad if they could inform us whether butter thus made, keeps longer than that made from the cream of the loppered or soured milk. Previous to our late visit to Orange, we supposed that it did; but we were informed there, by many with whom we conversed, that such was not the fact, at least, so far as our northern climate was concerned. Whether the rule holds good for the tropical climate, we did not inquire. We presume there are those in Orange county, who have shipped butter to the West Indies, and can give us full information on this point.

New York, Jan. 4th, 1844.

IN a late number of your paper, in the account of your visit to the Orange county dairies, you remark that the milk is suffered to stand upon the cellar-bottom until it becomes loppered, or sour, and that the people have an idea that it makes more butter in that state, than in any other, and of a better quality. This statement is believed to be incorrect, as far as the *quality* of the butter is concerned, and it is doubtful whether there would be more in *quantity*, if the whey or butter-milk were properly extracted. It is a well-known fact, that in many parts of Europe, as well as several instances in our own country, there are farmers who have not cows in sufficient numbers to churn every day themselves, but unite with their neighbors, and churn their milk together, in order to preserve a good quality in their butter. This will at once be obvious in examining the nature and decomposition of milk. When it is new and fresh, the butter or oleaginous part separates more perfectly from the whey or butter-milk, than it does when old and sour; and even it is possible for a chemical union to take place between the parts, when sour, that would be difficult to separate by the process of churning.

Milk becomes sour, in consequence of the fermentation of the whey which it contains; and the cause of butter being rancid, is the fermentation of the whey that remains incorporated within it. If butter be made from new milk, and the whey be totally extracted therefrom, it will remain fresh for several months without salting; yet, if made from sour milk, howmuchsoever it may be salted, and carried into a tropical climate, it will become rancid in a few weeks, unless kept cool by ice or some other means. Butter made from new milk will more perfectly imbibe salt, in like manner as fresh, untainted meat; but when made from sour milk, it will not readily combine with salt, neither will putrid meat receive salt at all. B.

EXPERIMENTS WITH MUCK.

As you considered my lucubrations on marl of sufficient importance to publish in your December number, I now forward you an account of a little experiment with swamp mud, or what, I reckon, you call muck at the north.

I had a few acres of swamp on the corner of my plantation, which, in particular seasons, I have no doubt has been the cause of some sickness among a part of my negroes who had their quarters there. I accordingly determined, two years ago this month, on draining it. This I easily effected in a few days, by digging a ditch through the centre four feet deep and five feet wide. As I had read much of the virtue of swamp-muck with you at the north, I thought I would try it on cotton in a different field, though nearly of the same quality of soil as that on which I spread the marl. I put on about the same quantity and in the same way as I did marl, but for some reason it did not produce as good an effect as the marl, though I anticipated a better one. Another little experiment I made with the muck was more successful. I had a barrel of lime left over from a small job done by my masons, and this I mixed with two wagon-loads of muck, and laid it up in a heap for three months. This compost I applied in March to my garden, and it had a wonderful effect on the growth of the vegetables during the whole season—better I think even than the usual quantity of stable-manure I am in the habit of using. Now did the lime make the difference? (*a*) If it did, I shall almost regret it, as lime is too costly as I am situated to use as a manure for my land.

C. Mc. D.

Sumpter District, S. C., Dec. 12th, 1843.

(*a*) The difference must undoubtedly be attributed to the lime, in consequence of its destroying the acidity of the muck, and hastening the decomposition of the vegetable matter in it. That which was applied to the cotton-field without admixture with lime, will require more time to display its good effects. We presume these will be fully apparent another year, although if lime could have been added, it would unquestionably have increased its value. Will our correspondent note the difference between the crops on the muck and marled fields another year without adding any more to them this season, and give us the result? We presume ere this that C. McD. is in possession of the last number of our second Volume, where he will find a capital article, page 367, on the value of muck as manure.

AGRICULTURAL COLLEGES.

The 19th century presents the singular anomaly, of an age, skilful to a degree beyond any that has preceded it, in all the arts that minister to the comforts and luxuries of man, with the single exception of that art, which is alone the base and support of all others—the art of an enlightened agriculture. All the elegancies of life too, and the refinements of intellectual culture, the useful and recondite sciences, literature, poetry, music, painting, and sculpture, have been patronised, illustrated, and studied, under every advantage, and have thus been pushed far toward their maximum of improvement; yet is the foundation of this varied and beautiful superstructure, the only portion of the edifice which is destitute of strength, order, symmetry, or design. And if we look back through the history of the ancients, reaching, according to the most approved chronology, much farther than 6,000 years, we find no record from which we can learn that any branch of the world's ancestry has been wiser, in this respect, than their descendants of the present day.

We shall not attempt to account for this gross and most inexcusable neglect, beyond the effect of that principle, which may almost be taken as an axiom in human conduct, that man's exertions are withheld, just in the ratio of the Deity's munificence. Supreme Benevolence has wisely provided for the success of the humblest efforts of unenlightened reason, in its struggles to procure from the earth the elements of subsistence; and on the very threshold of this success, have all human efforts been arrested. Content with having achieved the bare means of existence, the human mind has been stayed in this vast field of inquiry; and has turned away from it, if not with loathing, at least with indifference, and with a keen and delighted relish to other and less important and less praiseworthy objects of ambition. Whence comes this lack of reason, this short-sightedness to our own best interests? We must acknowledge ourselves incompetent to give the answer, and we gladly assign the solution of this difficult problem to our modern philosophers, who are so worthily busying themselves with "the law of progress;" from whom alone must light come, if it come at all.

Whatever the cause may be, certain it is, that the world has hitherto taken but the initiatory steps in the art of agriculture; and this broad land, like the western hemisphere in the days of Columbus, remains a terra incognita, an unexplored continent, inviting the most intelligent research, and ready to repay its explorers, with the highest rewards. It may be true, indeed, that portions of this goodly land have been heretofore discovered by the Northmen of preceding times; and even inhabited by a refined race of Aztelans possessing a high degree of culture; yet to the present race of man, no chart or history has been bequeathed, to point out its location or well-defined boundaries. Whatever discoveries may have been made in this great art in the early ages of the world, by the Egyptians, or other early civilized nations, who possibly, may have inherited from the antediluvians, a science and practice far beyond any thus far reached by successive generations—it is certain, that modern inquirers must re-discover it for themselves, if they wish now to have it in possession.

We would not be ungrateful for the worthy and efficient service, rendered, since the commencement of the present century, by the devoted sons of genius, who have given a portion of their time to the elucidation of the principles of agriculture, and who have begun a systematic investigation of the laws of nature, that needs only to be followed up, rigidly and unremittingly, to result in all the benefits which may be fairly demanded at their hands. But, we ask, what has been the success in this all-important pursuit, that will compare with the improvements in the mechanic arts, as shown in the application of steam, machinery for the manufacture of the different fabrics from wool, cotton, silk, the metals; and the various other new and important aids rendered to the useful occupations of the present day? With the facilities afforded by the above inventions, one person can now do as much, as could have been accomplished by twenty, without them, only 40 years ago. Can any approximation to such improvement be shown in the cultivation of the soil? We speak not of the mechanical instruments of the farm, which have measurably, and perhaps to the extent which could reasonably have been expected, participated in the modern progress of improvement.

Our meaning is much broader and deeper, and includes the whole science of agriculture, in all its varied phases and relations. We look to, and demand for agriculture, that enlarged and liberal measure of discovery, which will enable the human race to provide sustenance for its thousand millions of inhabitants, now covering the face of the earth, destined, probably, hereafter, to be indefinitely augmented; with an approximation to that certainty and success, that attends human labor in the other departments of life. We prepare our land and sow it to wheat, or plant it in corn; and after much doubt and uncertainty, reap from the first an average, in these United States, probably, not exceeding 14 bushels; and gather from the last, not more than 20 bushels per acre. Yet we have seen under favorable circumstances, that the former has yielded 80 bushels, and the latter over 180 bushels per acre. We claim, that abating somewhat for the accidents of seasons, unusual droughts, humidity, or frosts; or perchance, the destruction following upon the eccentricities of the elements, as a hail-storm, or whirlwind, on an ungarnered crop, we might look for the highest results from every well-directed effort, with the same confidence that we now look to the attainment of any given speed from a steamboat, after providing it with a suitable model, engine, and fuel; or the weaving a definite number of yards by a power-loom, properly constructed, and moved by the requisite force. To accomplish thus much, we have but to place our soil, and seed, and culture, in the same precise conditions, that have once been so successful; and yet how seldom is this achieved, even on the same field, and under the same direction as may have been before employed.

If we look beyond the discoveries hitherto applied, and bring to the science of agriculture such analogies as are appropriate to the subject, as shown from the progress of human invention in other departments of enterprise, we may reasonably expect developments in aid of this object, which would now be considered as perfectly Utopian. What brilliant results may yet crown the researches of the devotee of agricultural science, and what green and enduring wreaths of glory are destined to circle the brow of genius, who may hereafter successfully explore this hitherto almost untrodden waste. And how the comforts of this world, and its means of subsistence will be multiplied, when all the aids to its cultivation are rendered, which mankind have a right to demand.

We have then our deficiencies for the present and past, and our hopes for the future pointed out. Where are the remedies for the former, and the proper and reliable foundations for the latter? First and mainly, it may be answered, in bringing the right minds to the just and full consideration of this subject; and secondly, and as a necessary sequence to the former, the application of the requisite amount of funds, which shall secure genius of the highest caste, under all the circumstances of advantage, essential to its fullest effect.

Briefly, and in a form that all may comprehend, we say; we want an agricultural institution, founded and arranged on the best principles which can be dictated by enlightened experience, sound judgment, and a shrewd common sense; and so guarded, as to be unassailable by the corruptions of party, and beyond the reach of any hostile innovations of the fickle multitude; *and such an institution should be endowed with a permanent fund of one third, to half a million of dollars.* In this institution, we would place a chemist and geologist; an anatomist and physiologist; a botanist; an entomologist; and a practical agriculturist, who should give embodiment and effect to the suggestions of science, and run each out to a clear, distinct and definite result. These professors should be such as the choicest spirits of the age could afford; surrounded with all necessary assistants, books, and apparatus, and a well-conducted, and sufficiently-extended farm; and their services should be secured by a compensation perfectly adequate to their entire independence for life. Under these circumstances, we should have a series of experiments following each other in well-arranged and appropriate succession; the results of one, constituting the starting-point for another, and each department would be aided in its researches, by all the light afforded to it by the others.

With such an institution, how long would it be, ere the tyro in agriculture could go to it, with the same certainty of receiving the requisite information, that the mariner now does in consulting his chart and compass? The slow and dangerous coasting, amid shoals and breakers, that now mark out his benighted course, would at once give way to bolder movements, and more direct and certain success. Thus guarded, thus endowed, and thus filled, such an institution would revolutionize the practice of agriculture within the present age, and more than double the products of the earth, with the same labor and expense now devoted to them. Is this not an object worthy the legislation of statesmen, or the munificence of intelligent and patriotic individuals?

But with legislatures constituted as at the present day, we can not, probably, look to a single one of our 26 state governments, for the object desired; and as for Congress, nothing can be hoped from that quarter. From $10,000,000 to $12,000,000 is the amount of our annual *peace* appropriation for war; and this preparation for human butchery, is all legitimate and proper; but an appropriation of one twentieth of this amount, to feed the hungry, and clothe the naked, and carry comfort and consolation to the diseased and destitute, the aged and infirm, and afford thrift and abundance to all, would, in the opinion of our strict constructionists, rend our constitution to tatters. Verily the extremes of human wisdom and folly, like the continued extension of the arch of a circle, finally meet in the same point.

Hopeless then, as may be the realization of the desired aid from any present legislation, we have to expect it, if at all, from individual bounty alone. Here indeed, is a glorious field for immortality, for one sufficiently enlightened to grasp it, and the man who shall have the good sense and liberality, to found the first Agricultural College on the enlarged and munificent plan proposed, will secure a fame for all coming time, before whose brightness that of an Alexander or Napoleon would become dim, or distinguishable only by its intensity of darkness.

We must confess our hopes in the beneficial results of the present efforts in the cause of agriculture—our inquiries and discussions—our treatises and periodicals—our agricultural premiums and shows—come up to this extent, and scarcely more: they are awakening the public mind to a sense of its deficiencies; they are discovering the vacuum which yet remains to be filled. They are the crepuscular light which heralds the coming morn, but they are not the glorious effulgence of the king of day. But his approach is indicated beyond the possibility of doubt; and ere long the world will be in the full enjoyment of his benignant rays. They are not the Light so long looked for, and so much desired, but they are " the witnesses of that light."

We shall soon have, not only one, but a multitude of agricultural colleges, and when they have had time fully to mature their fruits, a certain and overwhelming abundance will crown the efforts of every enlightened agriculturist. But we must have them, unassociated with other departments of human investigation and acquirement, where they would be exposed to a foster-mother's kindness. They must be planted, in all the vigor of manhood, on an immoveable basis, where agriculture, and nothing but agriculture, shall be the theme and sole object of pursuit, to both professor and student. And well might they content themselves with the study of this single science, that embraces within its comprehensive grasp, (however disdainfully it may heretofore have been considered, by flippant scholars and shallow philosophers,) almost the entire range of the natural sciences, embodying as they do, the most abstruse, as well as the most beautiful investigations of the human intellect.

R. L. Allen.

New York, Jan. 6, 1844.

THE CRANBERRY.

This delicious fruit is coming into such general use, and is becoming so important an article of export, and so much interest is now taken in its cultivation, that I propose giving a concise account of the same, and its general history.

The common American cranberry (*oxycoccus macrocarpus*) is found growing in a wild state in swampy soils, in the eastern, middle, and western states. The first account we have of the cultivation of this fruit, is by the late Sir Joseph Banks, who in 1813, produced from a bed 18 feet square. 3½ Winchester bushels; being at the rate of 460 bushels to the acre. Capt. Henry Hall of Barnstable, Mass., has cultivated this fruit for the last twenty years. His method is to spread on his swampy ground a quantity of sand—this is to kill the grass; but where sand is not at hand, gravel will answer the same purpose. He then digs holes four feet apart each way, and puts in the holes sods of cranberry-plants about one foot square.

As this plant naturally grows in a very wet soil, it is generally supposed it will not thrive in a dry soil; but this idea is erroneous. Mr. Sullivan Bates of Billington, Mass., has cultivated the cranberry on a dry soil for several years with the utmost success—having produced 300 bushels to the acre on several acres, and his fruit double the usual size. His method is to plow the land—spread on a quantity of swamp-muck, and after harrowing the soil thoroughly, set out the plants in drills twenty inches apart,—hoeing them the first season. After this no cultivation is needed. By both the above methods the plants will cover the ground in three years.

From my own knowledge of the cranberry for the last thirty years, should I design commencing the cultivation of this fruit on an extensive scale, I would try it on both swampy and dry soils. I would drain the swampy soil, plow it as early as possible in the spring, and set out the plants on the plan of Mr. Bates.

To show the rapidity with which cranberry-plants increase, I will add this statement from an English work on fruits An English gentleman had only a few plants, these he cut in small pieces or cuttings, and set them out in a green-house. In the spring he prepared some swampy ground by spading it 12 inches deep. In a bed 150 feet long, and 4 feet wide, he set out seventy-five cuttings in one drill through the length of the bed, putting the cuttings two feet apart in the drill, and yet in three years the plants completely covered the ground.

In Massachusetts the cranberry-crop is once in a few years cut off by the late spring frosts. This may be prevented where a meadow is so situated as to be flowed. The water should not be over one or two inches deep on the cranberries, nor be left on later than the last of May in this climate. If kept on till it becomes warm, it will kill the vines. Perhaps the best management would be something as they flood rice-fields at the south, or water meadows in England—let the water on while the weather is coldest, and then take it off as it moderates. Sometimes, in the eastern states, the cranberries are destroyed by a frost in September; where water is convenient and plenty, the meadow could be flowed on cold nights at this season, as well as in the spring.

Previous to shipping cranberries, they should be run over a platform slightly inclined. The rotten and bruised fruit will not run off, but stick going down the platform, and are scraped off and thrown away. The perfect fruit is then put into tight barrels, and when headed up filled with water, and in this manner they arrive in Europe, in perfect order, and have frequently sold in foreign ports at $20 per barrel.

Rakes are now made for the express purpose of gathering cranberries, and although these rakes tear the vines somewhat, yet the crop is not diminished by raking; on the contrary, it has been increased. Some years ago, a gentleman in Massachusetts commenced raking his little patch of one fourth of an acre. The first year it produced 12 bushels, the next 18, the third 25, and so on till his last harvest, when the crop amounted to 65 bushels. This increase is easily accounted for by the method of gathering with rakes—the pulling up a few of the vines loosens the ground, and although not intended, yet in fact the raking acts as a partial cultivation.

To promote the cultivation of this fruit, the American Institute is making arrangements to supply horticulturists with plants early in the spring, in either large or small quantities; and I would recommend those wishing to purchase, in this vicinity, or New York, to get their supplies in this way. (*a*)

B. G. Boswell.

Philadelphia, Jan., 1844.

(*a*) The editor or this paper will take pleasure in executing any orders which may be forwarded him for this purpose, as the American Institute will allow him the privilege of selections. Any other fruits required he will also procure of the best kinds, and at the lowest rates.

DRAINING SWAMP-LANDS.

A FARMER upward of 70 years of age, in this vicinity, having subscribed for an agricultural paper, and observing an article in it upon draining swamp-lands in England, immediately bethought him of what could be done with about six acres near his own dwelling. It was a perfect frog-pond, thinly covered with tamerack, spruce, and alders. He dug a ditch round the whole of it, with an outlet at one corner, and the winter following, when the swamp was frozen, went on and cut down all the wood and brush, carried off the wood, and heaped the limbs and brush for burning. The next summer being a dry one, he burned off nearly everything combustible. The next year, what was previously swamp became dry and compact enough to bear a heavy yoke of oxen; he then had an anchor made with three sharp flukes or prongs, which would catch under the roots, and with this he dragged out nearly every stump and root on the six acres. These were heaped up into piles, and when dry, burned. He now marked the wet spots, and the winter following, sledded from a gravelly hill joining the swamp, sufficient dirt to make those spots dry and hard. The next year he harrowed the land and sowed with timothy, clover, and red-top, and, instead of an unsightly frog-pond, and rookery for blackbirds to harbor and destroy his corn, he has a beautiful meadow yielding three tons of hay to the acre. He has given it a light top-dressing of manure to warm and sweeten it, and now wonders that generation after generation should have passed away without having made this simple improvement.

J. THOMAS.

Worcester, Mass., Jan. 4, 1844.

WORN-OUT LANDS.

I FIND Massachusetts is full of worn-out land—large farms, not a tittle of which are cultivated, as they ought to be. These frequently have large houses on them, many of which have cost more than the farms would sell for. The sons of their owners, instead of staying at home and educating themselves for cultivating these lands in an improved manner, in many instances emigrate south and west in quest of a fortune, which one half the time they do not obtain after years of hard struggling and suffering, or they turn merchants and soon fail, or take to a starving profession already too full and overflowing; leaving their father, after draining every cent they can from him for a college education or an outfit, to carry on the farm as he best may in his old age. Thus situated, he can not afford to hire laborers to assist him, and he has no heart to make improvements himself; he therefore goes on in the old routine, makes what he can, and sends his yearly gains, if any there happen to be, to purchase new lands in the west. I find such a course as this, one of the greatest bars to improvement in my native state.

Many of the farmers now are alarmed at the facilities which the western railroad offers for bringing western produce to Boston; but I think these fears are without cause, for they can turn their attention in Massachusetts to raising fruits, vegetables, and indeed all such bulky articles as can never be transported any great distance at a profit. Besides, the manufacturing villages, since the revival of business, are affording good markets to everything raised in their vicinity; and by use of the railroads, the farmers can transport many things to Boston and sell at a fair profit, which they could not do before; and then they make their purchases there, which saves them from 10 to 20 per cent., so that upon the whole, I think the railroads in a few years, from the great facilities they offer, will even be found beneficial to the farmers here themselves.

A TRAVELLER.

SILK CULTURE.

SINCE I met you in New York, I have had a French treatise on silk handed me, a part of which is translated. It recognises the use of the mulberry-leaf for making paper of all kinds, and the fibrous bark for fabrics. While I have been day and night examining the subject, French ingenuity has stepped in before me, and done up the thing; but it has not given the whole manner of operating, which we need. Have you not some ingenious mechanics to construct a machine, with the best means of separating the bark from the wood, and the best mode also of converting the foliage into good paper? It will be done sooner or later I am confident; but we want it in the spring, particularly to use up the stalks to be headed down in April or May. The first No. of the translation from Mr. Fraissinet, you will see in the Hampshire Gazette of this week, on the subjects of mulberry paper and bark-silk. No. 2 may appear next week, and is very important to silk-growers, showing that there is nearly 100 per cent. difference in the use of foliage for raising cocoons. That to produce one cwt. of cocoons, 20 to 22 cwt. of foliage of grafted, or trees propagated by grafting buds, cuttings, or layers, is necessary; while twelve to thirteen cwt. of leaves from seedlings will accomplish the same result. If such be the fact, and that the trees from seed are more hardy and durable than any other mode of propagation, why may it not be useful to renovate mulberry plantations every few years? This idea is not altogether new; an eminent and skilful botanist advanced a similar suggestion to me on the introduction of the Canton and Asiatic seeds. As respects myself, I have, and can raise, plenty of seeds of the best kinds from my plantations. It may be found, that as the trees acquire age, the ground will be filled with roots, and that many decay and die.

Since my return from New York, a discovery has been made here by competent and experienced operators, and by sure tests, that the Pongee silk, so called, is a vegetable production, (as I had supposed, from the fibrous bark,) and that it never passed through the silk-worm. The test is satisfactory to my mind.

To encourage the silk culture, a bounty is needed, and I hope our good legislature will encourage new beginners. We had a bounty which has expired by its own limitation. I wish for something new—say a bounty of 15 or 20 cents on the pound of cocoons. One dollar on the pound of silk from the fibre of the bark, and 50 cents on every ream of good printing or writing paper. I am aware of the importance of uniform reeling, but we do not yet raise enough cocoons to establish filatures which will be needed as soon as the cocoons can be produced. Will not the proposed bounty, if granted, stimulate the new beginner to raise as many trees as he can, to feed his early one and open crop, save his after foliage for paper, and then the bark for clothing? This will be something new to the people. Will you suggest these to General Tallmadge and others in your paper?

D. Stebbins.

Northampton, Mass., Jan. 2, 1844.

We have received the Hampshire Gazette containing No. 1 of the translation from Mr. Fraissenet, and shall be obliged if Dr. Stebbins will continue them; we will endeavor at least to give a synopsis of their contents, for those interested in this subject.

CULTURE OF POTATOES, &c.

At your request, I send you a specimen of the pink-eye kidney potato, which is a fair sample of my last year's crop, together with the mode of culture.

Benefit of Lime in Destroying Insects.—On the first of May, the ground, a sandy loam, on which turneps had been grown the previous year, was plowed very deep, harrowed, and furrowed three feet apart—the furrows filled with rotted manure, incorporated with oyster-shell lime and charcoal dust. The largest potatoes were then selected for seed, cut into single sets of one eye each, and planted on the manure, eight inches apart, and covered with the plow. After this the field was top-dressed with lime and charcoal dust, in equal quantities, at the rate of 200 bushels to the acre, and harrowed. The potatoes were hoed and plowed twice during the season. On the 12th of October they were dug, and although the furrows were too far apart, and the potato a shy bearer, the produce was 432 bushels per acre, free from decay or disease. My object in liming, was to destroy any worm or insect that might be concealed in the soil.

Contiguous to the potatoes, I sowed a quarter of an acre with ruta-baga seed, in drills. On this crop I did not use lime or charcoal dust; the consequence was the entire loss of the crop, which was destroyed by worms. Adjoining, I sowed a quarter of an acre with orange carrot seed, which were soaked in strong ley 12 hours, and sown in drills, previously filled with a composition formed of ashes, salt, muck, poudrette, lime, and charcoal dust, in nearly equal quantities, except salt, a small portion of which only was used. The quarter of an acre produced 190 bushels, and would, in my opinion, have yielded one third more, had the blossoms been cut off.

Robert L. Pell.

Pelham, Ulster Co., Jan. 6, 1844.

REVIEW OF LIEBIG.

Chemistry in its Applications to Agriculture and Physiology. Third Edition.

It is rather more than three years since this remarkable book was laid before the British Association. In that time two editions have been printed; they have been received on the one hand with most extravagant praise, and on the other with unmeasured censure. The first was attributable to the clearness with which some views that are really new, and others that are thought so, were brought before the public; the second arose from the manner in which Professor Liebig was so ill-advised as to attack vegetable Physiologists, of whose science he knows much less than they of chemistry. The issue of all this has been productive of much good. Had it not been for English trumpets, public attention would never have been so strongly directed to Professor Liebig's excellences; and we have to thank the German catcalls that his own thoughts have been so advantageously turned to the correction of his deficiencies. The two together have produced a book infinitely superior to its predecessors, and to a very considerable extent unlike them. We hear no more of starch consisting of concentric layers of wax and amylin; the exaggerations about grand experiments on woods and meadows are omitted, as is the materialism about the unimportance of a vital principle, (p. 56, ed. 2,) and the offensive observations upon physiologists. In the place of these and other subjects that are cancelled we have a very considerable quantity of new matter. A new chapter is devoted to the consideration of "the Formation of Arable Land," another to "Fallows;" that on the "Rotation of Crops," is almost entirely rewritten, and so is the chapter on manures; while a thirteenth chapter is devoted specially to a general retrospect of the theories included in the previous pages. To these are added supplementary chapters on the sources of ammonia, and on the questions whether nitric acid is food for plants, and whether the nitrogen of the air takes a part in vegetation. In an appendix are given at length the important experiments of Wiegmann and Polstorf on the food of plants.

In the former editions ammonia was the great subject of discussion. As chemists seem agreed in considering it improbable that plants should obtain their nitrogen directly from the air, and as all plants contain that element, ammonia seems to be the only source by which it can be supplied; and in all probability this is a just view of the case. Nevertheless it is by no means *proved* that larger quantities of ammonia than the atmosphere naturally contains are necessary to the most healthy vegetation; and although it is certain that matter rich in ammoniacal salts is among the most powerful of manures, it has by some been supposed that other substances constantly present along with the ammonia may be of equal or even greater importance. Such is sulphuretted hydrogen; such are phosphates. This opinion is now taken up by Professor Liebig, who devotes a whole chapter to its consideration. After stating that animal matter contains invariably the substances named albumen, fibrin, and casein, all three rich in sulphur, he inquires:—

“From what source does the animal body derive these three fundamental components? Unquestionably they are obtained from the plants upon which the animals subsist; but in what form and in what condition, are they contained in plants?

“Recent investigations of chemists have enabled us to answer these questions with positive certainty. Plants contain, either deposited in their roots or seeds, or dissolved in their juices, variable quantities of compounds containing sulphur. In these nitrogen is an invariable constituent. Two of the compounds containing sulphur exist in the seeds of cereal plants, and in those of leguminous vegetables, such as peas, lentils, and beans. A third is always present in the juices of all plants; and it is found in the greatest abundance in the juices of those which we use for the purposes of the table.

“A very exact inquiry into the properties and composition of these substances has produced a very remarkable result, namely, that the sulphur-compound dissolved in the juice of plants, is, in reality, identical with the ALBUMEN contained in the serum of blood, and in the white of an egg; that the sulphur-compound in the seeds of the cereals possesses the same properties and composition as the FIBRIN of blood: and that the nutritious constituent of peas, beans, and lentils, is actually of the same nature and composition as the CASEIN of milk. Hence it follows that plants, and not animals, generate the constituents of blood containing sulphur. When these are absent from the food given to an animal, its blood can not be formed. From this it also follows, that vegetable food will be proportionally nutritious and fit to sustain the vital processes of the animal body, according to the amount of these ingredients contained within it.

“There also exists certain families of plants, such as the cruciferæ, which contain peculiar sulphur-compounds much richer in that element than the vegetable constituents of blood. The seeds of black-mustard, the horse-radish, garlic, onions, and scurvy-grass, are particularly marked in this respect. From all of these plants we obtain, by simple distillation with water, certain volatile oils, differing from all other organic compounds not containing sulphur, by their peculiar, pungent, and disagreeable odor.

“These compounds containing sulphur are present in the seeds of all plants, as well as in the plants themselves; and as they are particularly abundant in cultivated plants employed for animal nutrition, it is quite obvious that a substance containing sulphur is absolutely essential to the development of such compounds, in order to supply to them their proper proportion of this element.”

These are very remarkable statements, and require to be considered with great attention. The opinion, however, that sulphur is beneficial to plants is not originally Liebig's; he, on the contrary, so lately as 1842, adopted the erroneous views of Christison and Turner, and regarded the “hydrosulphate of ammonia (sulphuret of ammonium) as a deadly poison to vegetables, the properties of which we can not change by dilution.” (Ed. 2, p. 195.) It was, however, proved experimentally by Mr. Edward Solly, (*First Report of the Chemical Committee of the Horticultural Society*, p. 9, June, 1842,) that this was a mistake.

“I made use of the hydrosulphuret of ammonia, the very compound described by Liebig as being a ‘deadly poison;’ but in place of killing plants, I found that in small quantity it produced decidedly beneficial effects: in some cases when it was applied to plants in an unhealthy state from the action of other substances, it had the effect of invigorating them, and of restoring their leaves to a healthy, green, and crisp condition. The plants with which these effects were best observed were the garden-lettuce and the common Windsor-bean. The solution of the hydrosulphuret of ammonia employed was prepared by mixing a saturated solution of the compound with fifty times its bulk of water: such a solution had a most nauseous disgusting smell, and contained of course a large quantity of sulphuretted hydrogen. The plants under experiment were selected from many, and were of the same age and size, and as far as possible in the same healthy state of growth. Some were watered with common water, others with a dilute solution of hydrosulphuret of ammonia. At first only a few drops of the solution were given, but finding that this produced little or no effect, the dose was increased, and as much as half an ounce a day, and sometimes even more, was given to each plant; it was found that those thus treated became stronger and sturdier, their leaves were of a bright deep-green, the space between the nodes, or the distance from leaf to leaf, was shorter, and the stems were stronger, and the whole plant more flourishing than in those watered in the ordinary way, although all other circumstances were alike, and care was taken to place all under the same condition, by exposing them equally to air and light, and giving them the same quantity of water every day. Plants in a languid state from overdoses of nitrate of potash, or soda, or other saline manures, if not too much injured by their previous treatment, appeared to recover more rapidly when watered with the solution of hydrosulphuret of ammonia, than when merely treated with common water. In some of these latter cases a much stronger solution was employed than that already mentioned, containing two drachms of the saturated solution of hydrosulphuret of ammonia in fifty of water, and of this eight drachms were given daily. For sometime after thus watering the plants, the earth retained a strong smell of sulphuretted hydrogen, and the water which drained through, when tested by a salt of lead, evidently contained a large quantity of that gas.” And then he proceeds to point out the extreme improbability, that a substance so constantly evolved from decaying matter as sulphuretted hydrogen should *not* be the food of plants. “Its presence in manures is well-known and readily proved, but its presence in the air, in which it exists in exceedingly minute quantity, is less readily shown. We know, however, that it is constantly being formed on the surface of the earth, and we have evidence of its presence in the air by several effects, such as the tarnishing of some metals, and the blackening of white paint these effects, which take place gradually and slowly, are principally occasioned by the presence of sulphuretted hydrogen and its compounds, more particularly the hydrosulphuret of ammonia, in the air. Lastly, if the vegetable kingdom is the great means of purifying the air, and retaining it in a fit state for the respiration of men and animals, the absorption and decomposition of sulphuretted hydrogen by plants must constitute not the least important of their functions."

We believe, too, but can not lay our hands upon the passage, that Dr. Lankester had previously brought forward some evidence to show that sulphuretted hydrogen is not injurious to vegetation.

The source from which sulphur is obtained by plants is not the atmosphere, according to Dr. Liebig, but the soil, whence it is furnished by the decomposition of sulphates. "The air," he says, (p. 63,) "can not contain any substances in which sulphur is present, unless, indeed, we except *minute and scarcely appreciable traces* of sulphuretted hydrogen." We confess our inability to understand this. That ammonia is obtained from the air was one of the author's triumphant proofs, and yet it exists there in as minute and inappreciable a quantity as sulphuretted hydrogen; and we can not comprehend why the latter should not be thus supplied as well as the former. If not, what, let us ask, becomes of the volumes of this gas continually escaping from the surface of the soil? Are we to suppose that it is all consumed in forming sulphurets? Surely not.

Next to sulphur stand phosphates in their importance to vegetation. This, indeed is not a new doctrine; on the contrary, their value was pointed out in the former editions; not, however, we think, so strongly as now. We are rejoiced to find Prof. Liebig ranged on this side of the question, for it seems to us that if practical agriculture points out one thing more strongly than another, it is the great importance of phosphates. Nothing is more remarkable than the action of the superphosphate of lime on plants in gardens; no single agent that we have yet seen employed can be compared to it. This probably arises from garden-soil being rich in all other substances except phosphoric acid, which is always largely carried off, and but sparingly returned in the processes of garden-culture. The remarks of Prof. Liebig on this subject are too striking to be omitted:—

"In a former letter I showed you how great a waste of phosphates is unavoidable in England, and referred to the well-known fact that the importation of bones restored in a most admirable manner the fertility of the fields exhausted from this cause. In the year 1827 the importation of bones for manure amounted to 40,000 tons, and Huskisson estimated their value to be from 100,000*l*. to 200,000*l*. sterling. The importation is still greater at present, but it is far from being sufficient to supply the waste.

"Another proof of the efficacy of the phosphates in restoring fertility to exhausted land is afforded by the use of the guano—a manure which, although of recent introduction into England, has found such general and extensive application.

"We believe that the importation of one hundred-weight of guano, is equivalent to the importation of eight hundred-weight of wheat—the hundred-weight of guano assumes in a time which can be accurately estimated the form of a quantity of food corresponding to eight hundred-weight of wheat. The same estimate is applicable in the valuation of bones.

"If it were possible to restore to the soil of England and Scotland the phosphates which during the last fifty years have been carried to the sea by the Thames and the Clyde, it would be equivalent to manuring with millions of hundred-weights of bones, and the produce of the land would increase one third, or perhaps double itself in five or ten years.

"We can not doubt that the same result would follow if the price of the guano admitted the application of a quantity to the surface of the fields, containing as much of the phosphates as have been withdrawn from them in the same period.

"If a rich and cheap source of phosphate of lime and the alkaline phosphates were open to England, there can be no question that the importation of foreign grain might be altogether dispensed with after a short time. For these materials England is at present dependant upon foreign countries, and the high price of guano and of bones prevents their general application, and in sufficient quantity. Every year the trade in these substances must decrease, or their price will rise as the demand for them increases.

"According to these premises, it can not be disputed, that the annual expense of Great Britain for the importation of bones and guano is equivalent to a duty on grain: with this difference only, that the amount is paid to foreigners in money.

"To restore the disturbed equilibrium of constitution of the soil,—to fertilize her fields,—England requires an enormous supply of animal excrements, and it must therefore excite considerable interest to learn that she possesses beneath her soil beds of fossil *guano*, strata of animal excrements, in a state which will probably allow of their being employed as a manure at a very small expense. The coprolithes discovered by Dr. Buckland, (a discovery of the highest interest to Geology,) are these excrements; and it seems extremely probable that in these strata England possesses the means of supplying the place of recent bones, and therefore the principal conditions of improving agriculture—of restoring and exalting the fertility of her fields.

"In the autumn of 1842, Dr. Buckland pointed out to me a bed of coprolithes in the neighborhood of Clifton, from half to one foot thick, enclosed in a limestone formation, extending as a brown stripe in the rocks, for miles along the banks of the Severn. The limestone marl of Lyme Regis consists, for the most part, of one fourth part of fossil excrements and bones. The same are abundant in the lias of Bath, Eastern and Broadway Hill, near Eversham. Dr. Buckland mentions beds, several miles in extent, the substance of which consists in many places, of a fourth part of coprolithes.

"Pieces of the limestone-rock of Clifton, near Bristol, which is rich in coprolithes and organic remains, fragments of bones, teeth, &c., were subjected to analysis, and were found to contain above

18 per cent. of phosphate of lime. If this limestone is burned and brought in that state to the fields, it must be a perfect substitute for bones, the efficacy of which as a manure does not depend, as has been generally but erroneously supposed, upon the nitrogenized matter which they contain, but on their phosphate of lime. The osseous breccia found in many parts of England deserves especial attention, as it is highly probable that in a short time it will become an important article of commerce. What a curious and interesting subject for contemplation! In the remains of an extinct *animal* world, England is to find the means of increasing her wealth in agricultural produce, as she has already found the great support of her manufacturing industry in fossil fuel,—the preserved matter of primeval forests,—the remains of a *vegetable* world."

We quote this passage for the sake of showing the vivid style of the author, and not because we quite concur in Prof. Liebig's anticipations concerning coprolites, whose value is probably exaggerated.

From these we turn to other considerations. It will be remembered that in former editions the author adopted, as a proved fact, the theory of excrementitious deposites by plants, and even went so far as to assert that it was a necessary consequence of their secreting power, that excrementitious matters should be formed. We and others have pointed out the objections that must be taken to these views; and upon turning over the pages of this new edition we at first believed that they had been quietly abandoned. We find, however, at p. 75, that the accuracy of Macaire Prinsep's views is still unquestioned, at least in part. In this instance Dr. Liebig relies upon the following case:—

"Let us," he says, "consider the composition of the ashes of two fir-trees, as analysed by an acute and most accurate chemist. One of these grew in Norway, on a soil of invariable composition, but to which soluble salts, and particularly common salt, were conveyed in great quantity by rain-water. How did it happen that its ashes contained no appreciable trace of salt, although we are certain that its roots must have absorbed it after every shower?

"We can explain the absence of salt in this case by means of the direct and positive observations referred to, which have shown that plants have the power of returning to the soil all substances unnecessary to their existence."

But to our apprehension, there must either be some error in these analyses, or the trees never could have absorbed any salt. For if they had ever taken it up, there *must have been some portion remaining at the time when they were felled.* It strikes us that this case *proves too much.*

But if the old theory of vegetable excrements be virtually abandoned, or limited to the extrication of oxygen, (p. 170,) we have a new one, which is not a little curious. Professor Liebig considers bark a kind of excrement. To avoid the suspicion of misrepresentation we quote his words:—

"These barks are in so far true excrements, that they arise from living plants, and play no further part in their vital functions; they may even be removed from them, without thereby endangering their existence. It is known that certain trees throw off annually their barks: this circumstance viewed in its proper light, shows that, during the formation of certain products formed by the vital processes, materials arise which are incapable of experiencing a further change.

"There is every reason to believe that this separation takes place over the whole surface; it is observed not only on the stem, but also on the smallest twigs; and hence we must conclude that the same excretory process goes on in the roots."

We will not set about seriously refuting this strange hallucination, but content ourselves with asking whether scurf-skin, the points of our hairs, the ends of our nails, or the slough of a snake, are excrements?

We had hoped that Professor Mohl had put an end to the folly of asserting that dryness of the soil is of no consequence to plants *when matured;* that is, we suppose, when the fruit is ripened. We are, however, mistaken. Professor Liebig maintains this opinion with as much pertinacity as if there was not a tree or bush within a hundred miles of Giessen:—

"When a plant is quite matured, and when the organs by which it obtains food from the atmosphere are formed, the carbonic acid of the soil is no further required.

"Deficiency of moisture in the soil, *or its complete dryness,* does not now check the growth of a plant, provided it receives from the dew and from the atmosphere as much as is requisite for the process of assimilation. During the heat of summer it derives its carbon exclusively from the atmosphere."

It seems useless to put him right upon such points, for he does not appear to be acquainted with some of the commonest facts connected with vegetable life. We shall therefore dismiss the subject for the present without further comment, in the hope that with time this learned chemist may become sensible of such errors as this, and his speculations about lactescent plants, which he still maintains have *their moisture secured from evaporation by a coating of caoutchouc and wax, which surrounds them by a waterproof envelope!!*

Gardeners' Chronicle.

NORTHERN CALENDAR FOR FEBRUARY.

CONTINUE to look well after your stock. This and the following, are the trying months for animals, and if carried well through these, you may more safely trust them afterward. As all animals are accustomed to green food throughout a great part of the year, such as are now kept on dry, should have their condition carefully observed, and their food varied to suit their wants. *Roots* ought always to be provided for an occasional change. Potatoes, sugar-beet, mangol-wurzel, ruta-baga, carrots, or parsneps, may be given, as they can be most profitably raised by the farmer. According to Davy the order of their nutritious properties, pound for pound, stand thus: 1, potatoes, 2, sugar-beet, 3, mangol-wurzel, 4, parsnep and carrot, 5, ruta-baga, 6, and by far behind all others, the common turnep. We are of opinion that the carrot and parsnep are equal to the sugar-beet, and the better varieties, perhaps, should stand second only to potatoes. Chaff, grain, bran, &c., may also occasionally be given, and for working animals, grain invariably at all times. If you expect hens to lay during the winter, they must have a warm room, and plenty of suitable food. A stone, brick, or what is better than either, a clay house, impervious to wind and cold, with a supply of oats, shrunk wheat, barley, and even corn, with some animal food added, in addition to a supply of gravel and old mortar or lime, and water, will give you a constant supply of fresh eggs all winter.

Finish threshing your grain, and have it stored beyond the reach of rat, mouse or weevil. Scions may be cut, during this and the two succeeding months, for grafting, and carefully laid away in a cool, damp place, till required for use. If the roots have not been assorted when stored for the winter, the best should now be selected for seed and use, and the remainder fed out to the stock previous to a growth of green food in the spring. The young animals, calves, lambs, &c., should be carefully protected from cold, and have an abundant supply of food. When it is intended to raise animals on the farm, it is better to have them dropped from the latter part of March to the middle of May. The weather is then warmer and fresh feed abundant, and the young can be reared with half the expense and risk that attends them during severe weather. But such as are near a market, and wish to send in early calves, and lambs, may find an advantage in having them come much earlier in the season; but all the hopes of the farmer will be disappointed, by neglecting the proper means of protection. Such cattle as have been suffered to get poor, will probably be found to have lice, which at this season, collect around the roots of their horns. They may be destroyed by a strong decoction of tobacco juice, or Scotch snuff, lard, fish oil or soft soap, applied on the top of the head, and along the back to the root of the tail; also spirits of turpentine, mercurial ointment, and corrosive sublimate, are effectual remedies, but dangerous when cattle can lick the part where they are applied, both being a deadly poison. After the cattle are once rid of lice, keep them in good condition, and they will be but little exposed to a renewal of the disease. Prepare for making maple sugar the last of this month.

Endeavor to finish breaking hemp this month, as March will be a much more busy one. If the weather be open continue plowing.

Kitchen Garden.—Sow early cucumbers and melons in hot beds. If well managed, the cucumbers sown early in this month will produce fruit in April. Celery can be sown in a warm border, and will be ready to vegetate the first mild weather. The directions for last month will apply equally well to this.

Fruit Garden and Orchard.—Gooseberries, currants and raspberries, may now be pruned if the weather be tolerably mild. Fruit-trees that grow too luxuriantly and do not bear, should be pruned in the roots. Cut away the wood in grape-vines that have borne fruit the preceding season, and leave the wood formed that season to bear fruit the ensuing year. If grape pruning is left until the sap begins to rise, the vines will bleed profusely, and suffer much injury. It is said that the first bud on a shoot will not produce fruit. Consequently a second or third should be left in pruning.

Flower Garden and Pleasure Grounds.—See directions for December and January. Finish pruning hardy flowering shrubs. Cut off all dead wood and straggling or interfering branches close to the body or limbs. Keep the gravel walks neat and clean, and roll them after the winter frost.

SOUTHERN CALENDER FOR FEBRUARY.

In the beginning of this month repair all your fences, and employ your men in cutting up and rolling logs—and your women and children in knocking down cotton-stalks, when not too large, with a stick, cutting corn-stalks, firing log-heaps, and burning chunks and the brush that may have fallen from trees, clearing up hollows, &c., and be in readiness to commence plowing your cotton-fields as soon as the season will admit. By the latter end of the month, if the weather be favorable, keep as many plows running as is convenient when the earth is in proper condition. By keeping busy at this season of the year, it will enable you to control your crop, and give you time to do your work effectually, which is one half of the battle.

If your land was in corn or cotton last year, run off the rows in the old water furrow with a short plow this year, using two horses, and running deep. Then, with a turning plow, throw to this two furrows, one from each side in order to reverse the last beds. Leave the ground in this condition until a day or two before you wish to plant, and then break out the entire surface between the rows—the baulk. Prepare your ground and sow your tobacco seed, if you have not done it before.

Give to your cows boiled cotton seed, with a little chopped corn added. It will give the butter a rich flavor and fine yellow color. The seed must be well cooked, which will require but a few minutes.

Mark off your sweet-potato ground some time in this month with a double-horse plow, and let it lie until it becomes well settled by two or three rains.

If you have a good grape-vine, take care of it, and propagate others from it by cuttings and layers, and its fruit will repay your labor. If you have not, buy one and plant it the present spring. The second year after planting, it will produce you fruit, which will increase every year as the plant enlarges. The fruit will be found to be wholesome and grateful, and you will realize the pleasure of *"sitting under your own vine"* during the intense heat of summer. The native varieties most worthy of cultivation, are the Isabella, Winne, and Catawba. If you wish foreign fruit, the sweet-water, Chasselas, black cluster, and Burgundy, are to be preferred. A little experience will make you familiar with their management.

As soon as the black frosts are over, which usually occurs by the last of the month, and the ground becomes sufficiently dry, the covering of the cane that was planted in autumn or early winter, should be reduced to one or two inches, by scraping with hoes the earth from the top of the drills, toward the centres of the spaces between the rows. After this, the hoes followed by the plows, should be passed through the fields about every ten days, in order to keep down the grass and weeds.

Should the season have been so backward as to have prevented you from finishing planting your sugar-cane, it can be done at the close of this month. Do not cover it at a depth exceeding two inches.

Sow all kinds of early melons, cucumbers, kidney beans, squashes, asparagus, radishes, lettuce, and garden cresses for seed. Sow late dwarf peas and onion seed, carrots, parsneps and red beets. Sow tomatoes in hot beds, or in boxes in the house, if the season is backward; the egg tomato and the golden drop are the best kinds. A compost of pigeon-dung and earth will give them an early start.

This month is proper for grafting the cleft. If your trees have not been pruned, do it at once. Set out fig trees—plant hop roots and all kind of aromatic herbs. Set out cabbages, lettuces, carrots, parsneps, turneps, &c., designed for next year's seed. Sow oats, plant Indian corn, and early Irish potatoes.

FOREIGN AGRICULTURAL NEWS.

By the arrival of the steamship Britannia, we are favored with our usual files of journals up to the 4th of January. In addition to these, we are indebted to Mr. P. L. Simmons, foreign newspaper agent, London, for a file of the Sussex Express, and Illustrated News. Our journals are rich in all sorts of matters appertaining to agriculture, and we would be glad of ten times the space that we have to spare this month for making extracts, for our readers would find them of absorbing interest.

Markets.—*Ashes* were held for higher terms. *Cotton* has advanced from ⅛d. to ¼d. per lb., and was extremely firm. Speculators and the trade were eager to purchase, especially of the common and middling qualities, and a large business had been done the preceding month. During the first four days of January, 50,000 bales changed hands at an advance of ⅛d. per lb. Stock on hand on the 1st of January, 653,900 bales, against 456,600 bales at the same period last year, and 429,830 the year before. The consumption of cotton in England in 1843 has increased about 150,000 bales. *Wheat* and *Flour* have undergone a slight reduction of price, although it is acknowledged that the harvest in Great Britain last year was a deficient one, and that considerable importations of bread-stuffs will be needed. It is the general opinion that wheat and flour must advance soon. Incendiary fires of wheat-stacks continue throughout the south of England. *Provisions* were in good demand, and the operations the past year in American, have been heavy. A year since to the great body of the English people, our provisions were scarcely known, and the trade is yet only in its infancy. They have now completely established themselves in the English market and overcome prejudice. The finer qualities of cheese were brisk; *Beef*, *Pork*, and *Lard*, in moderate request. The latter article has fallen a trifle. *Naval Stores* were in tolerable demand. *Rice* and *Tobacco* quiet and without change.

Money continues very abundant, and capital is accumulating in large masses, and seeking investment at the lowest rates of interest. The gold mines of Russia have been uncommonly productive the past year, and the precious metals seem to be in abundance everywhere in Europe.

American Stocks of those states which have faithfully paid their interests are rising.

Business generally is in a prosperous condition.

Death of Mr. Loudon.—This celebrated agricultural writer died at Bayswater, on the 14th December, in his 60th year, and has left a void no other man in Great Britain will easily fill.

Death of Dr. Van Mons.—This excellent and scientific horticulturist, died at Louvain in September last, in the 78th year of his age. He was the possessor of a nursery and garden for a long time in Belgium, and was celebrated for his new varieties of fruits, especially pears, and we believe produced also many new flowers.

Smithfield Cattle-Show.—The great event of the month was the annual show of fat stock at the Smithfield market, which began on the 6th of December, and continued till the 9th. The Illustrated News gives us portraits of the prize animals, and the show is said to have eclipsed all others which have gone before it. We notice the Short-Horns are well in the ascendant this year. A cow of this breed, bred by Sir Charles R. Tempest, took the gold medal; and an ox of Earl Spencer's took the silver medal, being the first prize in Class I. A Hereford ox belonging to Mr. Watson, stood second, while the Short-Horns gained the third and fourth prizes. In Class II. the Short-Horns were first and fourth, the Herefords second and third. In Class III. a North Devon steer took the first prize, and a Hereford the second. In Class IV. the same. In Class V. a Hereford took the first prize. In Classes VI., VII. and VIII. for cows, the Short-Horns took all the first and second prizes. The show of sheep and pigs was good, but we have not room for details. Prince Albert was among the exhibiters, though he took no prizes. This could hardly be expected for so young a farmer, and we can only wish him better luck next time. He attended the show in person, handling the stock as usual. There were an unprecedented number of visiters present, they being calculated at upward of 60,000.

R. L. Allen.—We notice that the communication of Hints for the Management of Hens, of our correspondent above, is copied at length in the British Farmers' Magazine for January.

Prolific Potatoes.—A friend of mine sent me a potato in April, and mentioned at the same time that it was a very prolific variety. The potato weighed about 6 oz. I planted it whole, and last week took up the produce, which weighed 29 lbs., and consisted of 66 potatoes, 26 of the largest weighing 21 lbs. The above is the largest return I have ever seen.

Blackberry Jelly.—Put the fruit into a jar, tie paper over it, and stew in a sauce-pan of boiling water, or by putting the jar into the oven; strain off the liquor, and to every pint of juice, add a pound of loaf-sugar; put all into a preserving-pan, simmer and skim it. When it will jelly upon a plate, it is fit to be put into jars for use.

Cure of the Mange.—This may be effected by washing the animal occasionally with the water in which potatoes have been boiled.

Breeding Bulls.—In an excellent article on this subject by Mr. Goodwin, in the Veterinarian, he claims docility of temper as an important point; and in illustration of the merit of this, gives the following anecdote:—

The other day, on looking over the well-arranged and well-managed portion of the agricultural department of the Little Park, at Windsor, a fine short-horned bull, in the shafts of a cart, attracted my attention. Mr. Ingal, the judicious manager of that establishment, observed that he was truly valuable, not only as the best and most useful slave about the premises, being in the continual practice of drawing from two to three tons weight in a cart alone, but as an animal possessed of the finest temper possible. Mr. Ingal, in continuing his narration, said that on one occasion he was turned into an adjoining pasture with another bull, when one of the farming men, in his usual occupation, had occasion to pass not far from them: one of the bulls commenced a furious attack on the man, got him down, and was on the point of tossing him with his horns. This ever-to-be revered and celebrated beast, seeing what was passing, set off at speed to the scene of action, not to assist the monster in the bloody work he had begun, but to the aid of the defenceless man within his grasp. Feeling confident in his power, he charged the ferocious brute, and was instantly victorious. The man, during this conflict, lay prostrate in a state of fear and insensibility. On the return of his faculties he found himself still within the reach and power of a bull, but not the vicious beast that had first assailed him, but his fellow-slave, who, after his victorious conflict with the monster, had returned to him, and, in order to pacify him and convince him that he had not anything to fear, the docile creature began to lick him. The man soon perceived that it was his old friend, and got up and heaped on him a load of caresses, and returned to his usual occupation without much injury.

Editor's Table.

The Boston Traveller is informed that an editorial appeared in one of its July or August papers, with the following sentence: "Yet we do not hold to the idea which was sometime ago advanced by Mr. Allen, of New York, that any person can *at will* breed Ayrshires by a cross of the Durham Short-Horn with our own native stock." As we published a full explanation of our views in the June No. for 1842, page 97, of the Cultivator, showing that we had been misunderstood, we thought the Traveller had done us injustice in not taking the remarks at that time for our opinions on this subject. The Traveller now says, in its paper of 6th of January:—

"We know Mr. Allen has been charged with declaring that we can make as many Ayrshires in this country as we please, by crossing the Durham with our best native cows. We regarded this as rather too literal a construction of Mr. Allen, and our understanding of the matter was, that he intended to convey the idea that Ayrshires were the result of a cross of the native cattle of Scotland with the Durhams, and that we could obtain a similar result by a cross of our natives with the Durhams."

This is satisfactory, and we are obliged to the Traveller for the explanation, for we deemed the first sentence quoted rather a *misstatement*, but more especially this, which immediately followed it: "He admits, however, if a native cow of the Ayrshire stock fifty years ago could now be found, a near approximation might be obtained by this cross." We have not the slightest recollection of ever making any such admission as this quotation contains, and believe that the Traveller is entirely in error in attributing it to us.

Transactions of the Worcester County Agricultural Society for the year 1843.—This is an octavo pamphlet of 68 pages, the first 20 of which are devoted to Mr. Hudson's address at its late annual meeting, and the residue consists of the reports of the various committees upon the occasion. We have perused these Transactions with no less pleasure than profit, and are glad to see them printed in such a form as to be preserved, and easily referred to hereafter.

Comfrey Root, or Symphytum.—We learn by the Portsmouth Journal, that Mr. Robinson is of opinion, from an imperfect experiment made by him on a small patch of ground, that he will be able next year to gather, at two cuttings, eight tons of leaves of the Comfrey root to the acre, which he says is excellent food for stock. The root is considered very nutritious for man or beast, and Mr. Rich, of Troy, N. H., asserts, that it can be harvested every two or three years, and will yield over 2,000 bushels per acre. We should think it advisable to try the experiment of a rod or two square of growing comfrey in this vicinity. It is cultivated by transplanting the roots, which grow wild in the fields, to any ground deep plowed and well pulverized.

Cane-Cutter.—We see by the Baton Rouge Gazette, that a Mr. Bryan has invented a cane-cutter which works by horse power, and cuts as much cane in 17 minutes as 19 hands can do in an hour. If this be so, it is the greatest labor-saving agricultural machine invented since Whitney's cotton gin.

Castor Oil.—It is not generally known, but it is a fact, that every planter might raise as much castor oil in one year as would be required on his plantation during several years. The plant from which it is made (the *recinus communis*) is cultivated largely in many of the middle and western states, but we believe it grows to greater perfection in Louisiana. We have one in our garden which is ten or twelve feet high, and full of beans. The process of procuring the oil is perfectly simple: boil the beans, bruised, in a bag, and as the oil rises, skim it off. It will be found as clear as olive oil.—*Planters' Ban. & Ag.*

Large Potatoes and a Great Yield.—We cut the following paragraph from the Planters' Banner, and shall be obliged if the editor will inform us how many bushels make the barrel at the south. Two bushels and three pecks is the northern measure, which would make, if the French arpent be the same as an English acre, at the rate of 660 bushels per acre—an almost incredible yield for sweet potatoes:—

"The editor of the Creole says that A. B. Dauterive, of St. Martin, has shown him a sweet potato weighing 5½ pounds. Mr. D. obtained two hundred and seventy barrels of sweet potatoes from one and an eighth arpents of land."

Cuba Tobacco.—The Louisville Journal says: We are glad to learn that a number of our agricultural friends to whom we gave Cuba tobacco-seed have been very successful in the cultivation of the plants. Our friend Lewis Sherley has a small and beautiful crop of this fine tobacco. The leaves are very large, and the plants remarkably thrifty; one of them we measured with a foot rule, and found it to be eight feet six inches high, and it is not done growing yet. There is no exaggeration in this statement, and yet it seems so incredible that we feel very much as an honest Irishman did on a certain occasion. Pat wished to induce some friends whom he had left behind in the Emerald Isle, to emigrate to this land, where, according to Franklin, roasted pigs run about crying "Come and eat me!" and in writing to his friends, he stated that a man could get meat three times a week. He showed his letter to his employer, who reproved him, and told him he got meat three times a day. "That's all very thrue, plase yer aner, but if I was to be afther tellin' thim so, they wouldn't believe me at all at all!"

The Journal need not have added the comical story of the Irishman to fortify its statement, for in the colder climate and poorer soil of this vicinity, we saw a Cuba tobacco-stalk last season over six feet high; and surely it is no great matter in a country like Kentucky, where hemp grows as large as a *good-sized tree*, to beat us in the small matter of a couple of feet in a tobacco-stalk.

To Correspondents.—J. M. S. We have not been able to ascertain yet the lowest price at which guano manure may be obtained, probably $4,50 per cwt.

Prof. C. It is much better to procure young Cedars, and indeed to transplant all evergreens, instead of sowing the seed. The islands in Lake Erie are full of them, and other parts of the west. The White Cedar makes a beautiful hedge. See Vol. 2d, page 177.

Agricola shall be furnished the required information soon respecting Pot-Ashes.

W. H. S. Let us have the results of the dairy, and the article on Cotswolds, at your earliest convenience.

T. C. P. Send plan of the piggery.

S. W. We shall take up the subject of China, and other breeds of pigs soon. We have latterly been called upon in various quarters for information on these points, and are in hopes of getting something new to communicate before writing.

Examiner, T. C. Peters, B. Hodge, T. D. X., C. T. Botts, S. S., M. W. Philips, T. R. R., Dendy Sharwood, A. R. D., if possible in our next.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, JANUARY 25, 1844.

ASHES, Pots,	per 100 lbs.	$4 50	to	$4 62
Pearls,	do.	5 06	"	5 12
BACON SIDES, Smoked,	per lb.	3½	"	4½
In pickle	do.	3	"	4
BALE ROPE	do.	6	"	9
BARK, Quercitron	per ton	23 00	"	24 00
BARLEY	per bush.	54	"	56
BEANS, White	do.	1 25	"	1 75
BEEF, Mess	per bbl.	6 00	"	7 00
Prime	do.	4 00	"	5 00
Smoked	per lb.	5½	"	7
Rounds, in pickle	do.	4	"	5
BEESWAX, Am. Yellow	do.	28	"	30
BOLT ROPE	do.	12	"	13
BRISTLES, American	do.	25	"	65
BUTTER, Table	do.	12	"	20
Shipping	do.	6	"	10
CANDLES, Mould, Tallow	do.	9	"	12
Sperm	do.	31	"	38
Stearic	do.	20	"	25
CHEESE	do.	4	"	7
CIDER BRANDY, Eastern	per gal.	35	"	40
Western	do.	28	"	35
CLOVER SEED	per lb.	10	"	11
COAL, Anthracite	2000 lbs.	5 00	"	6 00
Sidney and Pictou	per chal.	5 75	"	6 25
CORDAGE, American	per lb.	11	"	12
CORN, Northern	per bush.	51	"	52
Southern	do.	50	"	51
COTTON	per lb.	8	"	12½
COTTON BAGGING, Amer. hemp	per yard.	16	"	18
American Flax	do.	15	"	16
FEATHERS	per lb.	25	"	31
FLAX, American	do.	8	"	8½
FLAX SEED, rough	per 7 bush.	9 00	"	9 75
clean	do.	10 00	"	11 00
FLOUR, Northern and Western	per bbl.	4 75	"	5 00
Fancy	do.	5 25	"	5 50
Southern	per bbl.	4 75	"	5 00
Richmond City Mills	do.	5 62	"	5 75
Rye	do.	3 37	"	3 50
HAMS, Smoked	per lb.	8	"	9
Pickled	do.	4	"	7
HAY	per 100 lbs.	55	"	60
HIDES, Dry Southern	per lb.	9	"	11
HEMP, Russia, clean	per ton.	180 00	"	185 00
American, water-rotted	do.	140 00	"	180 00
do dew-rotted	do.	90 00	"	140 00
HOPS	per lb.	7	"	9
HORNS	per 100	1 25	"	5 00
LARD	per lb.	5½	"	7½
LEAD	do.	3½	"	4
Sheet and bar	do.	4	"	4½
MEAL, Corn	per bbl.	2 50	"	2 62
Corn	per hhd.	12 00	"	12 50
MOLASSES, New Orleans	per gal.	30	"	32
MUSTARD, American	per lb.	16	"	31
OATS, Northern	per bush.	35	"	38
Southern	do.	32	"	34
OIL, Linseed, American	per gal.	75	"	80
Castor	do.	80	"	85
Lard	do.	55	"	65
OIL CAKE	per 100 lbs.	1 00	"	— —
PEAS, Field.	per bush.	1 25	"	— —
PITCH	per bbl.	1 12½	"	1 37
PLASTER OF PARIS	per ton.	2 00	"	2 25
Ground, in bbls	per cwt.	50	"	— —
PORK, Mess	per bbl.	8 75	"	10 00
Prime	do.	7 00	"	8 00
RICE	per 100 lbs.	2 37	"	3 00
ROSIN	per bbl.	65	"	95
RYE	per bush.	62	"	64
SALT	per sack	1 35	"	1 50
SHOULDERS, Smoked	per lb.	4	"	6
Pickled	do.	3	"	4
SPIRITS TURPENTINE, Southern	per gal.	32	"	33
SUGAR, New Orleans	per lb.	5	"	8
SUMAC, American	per ton	25 00	"	27 50
TALLOW	per lb.	6	"	7½
TAR	per bbl.	1 25	"	1 50
TIMOTHY SEED	per 7 bush.	12 00	"	15 00
TOBACCO	per lb.	3	"	6½
TURPENTINE	per bbl.	2 12	"	2 50
WHEAT, Western	per bush.	1 00	"	1 65
Southern	do.	90	"	1 00
WHISKEY, American	per gal.	23	"	25
WOOL, Saxony	per lb.	35	"	50
Merino	do.	35	"	40
Half-blood	do.	25	"	30
Common	do.	20	"	25

New York Cattle Market—January 22.

At market, 1100 Beef Cattle, 40 Cows and Calves, and 2500 Sheep and Lambs.

PRICES.—*Beef Cattle*—The quality was inferior to last week, and previous prices were obtained with difficulty. We quote $4.25 *a* $4.75 to $5.25 *a* $5.50, with extra at $6.

Cows and Calves.—All sold at $14 *a* $26 each.

Sheep and Lambs.—Were all taken at $1.50 *a* $3.50, and a lot of prime Wethers at $5.50 *a* $6, according to quality.

Hay.—Sales of loose at 62½ *a* 81 cents per 100 lbs. by the load.

—

REMARKS.—*Ashes* are held above the views of shippers, and sales are at a stand. *Cotton*, in consequence of the late favorable news per the Britannia, has recovered the slight fall it experienced a week since. It is still above the European market. We have letters of a late date from our southern correspondents, giving a gloomy account of their picking throughout the valley of the Mississippi and its tributaries. Many estimate that the present crop will not exceed 1,600,000 bales; we remain firm in the conviction, however, that it will reach 1,800,000; the Carolina, Georgia, and Alabama crops not having suffered so much as those further west. Export from the United States since 1st September last 307,918 bales; same time last year, 600,696; same time year before 370,454. *Flour* and *Meal* are firm. *Corn* is scarce; all other kinds of grain in good demand, with the exception of *Barley*, which is out of season. *Hemp* is more brisk. *Molasses* firm. *Naval Stores* dull. *Provisions* the same. *Rice* in fair request. *Seeds* inactive. *Sugar* dull. *Tobacco* quiet. *Wool* keeps steadily advancing, and is likely to pay the farmer for several years to come, as good a profit, more especially the finer kinds, as anything to which he can turn his attention. The stock on hand is light. *Dressed Hogs* at Cincinnati $2.25 to $2.81 per 100 lbs. It is estimated that 200,000 have already been brought in to that market. The mild weather during January has been unfavorable for the killing season.

Money, owing to the banks making up their annual returns, is more in demand.

Stocks, for the same reason as expressed above have slightly fallen.

Real Estate continues to be offered without much improvement.

POUDRETTE

Of the very best quality for sale. Three barrels for $5, or ten barrels for $15—delivered free of cartage by the New-York Poudrette Company, 23 Chambers street, New York. Orders by mail, with the cash, will be promptly attended to, and with the same care as though the purchaser was present, if addressed as above to

Dec. 1, 1843.—3t. D. K. MINOR, Agent.

DURHAM BULL AND SOUTH-DOWN SHEEP.

For sale, a Durham Bull descended from Whitaker's stock on both sides, and whose pedigree is in the late volume of Coate's Herd-Book. Also, three very superior young South-Down bucks, bred from one of the best flocks in this country.

Enquire post-paid of the Editor of this paper.

POLAND FOWLS.

A few of these beautiful fowls can be had at $2 per pair. They are very choice of their kind and well bred. Apply post-paid.

CHARLES STARR, Jr.
Mendham, Morris Co., N. J.
Jan., 1844.

FARM FOR SALE.

A small farm of 25 acres, pleasantly situated in Passaic county, New Jersey, on the turnpike from Newark to Paterson. It is 3 miles from Paterson, 4 from Bloomfield, and 8 from Newark. The soil is good, and about 10 acres seeded down with timothy and clover; 4 acres thrifty young wood; a well-built and substantial stone house on it, near which is a never-failing spring of the purest water running through the grounds; a good apple-orchard, and abundance of small fruit; also, about 60,000 Morus Multicaulis trees, which have stood the climate the last 6 years. This farm is well situated for raising fruits and vegetables for the New York market; being 14 miles from the Hoboken Ferry, and easy of access by both the Newark and Paterson Railroads. For particulars inquire of the Editor of this paper.

HOVEY'S HORTICULTURAL MAGAZINE.

We have recently been appointed agents for this periodical, justly considered the most valuable of its kind in the United States. Any person subscribing through us will be promptly served, and we invite all interested in this subject to call and examine the work.

For any of the above works, or periodicals, or books of any kind, address SAXTON & MILES, 205 Broadway.

Price $3 a year.

PROPOSAL FOR A COURSE OF LECTURES ON AGRICULTURAL CHEMISTRY.

By D. Pereira Gardner, M. D. Formerly Professor of Chemistry and Botany in Hampden Sidney College, Va., Member of the Lyceum of Natural History, New York.

The Course is intended to be of service to the practical agriculturist, and therefore the methods of discovering and estimating the amount of useful saline matters in the soil will be fully examined. Portions of Botany, Vegetable and Animal Physiology, will be included, to enable the farmer to understand all that relates to the food of plants and animals. Geology, so far as it is necessary to the study of soils and the art of drainage, will be introduced. The action of Manures, and the quantity that may be economically applied, will also be considered.

The Course will be fully illustrated by drawings, minerals, geological specimens, chemical experiments, and analysis.

The number of lectures will be twenty, distributed in nearly the following order :—

One Lecture—On the Constitution of the Atmosphere and Gaseous Matters.

One Lecture—On the Essential Structure of Vegetables.

One Lecture—On the Supply of Gaseous Food to Plants.

Two Lectures—On the Physical and Chemical Constitution of the Soil, and its relations to moisture and drought, the theory of drainage, fallows, &c.

One Lecture—On the Organic Food of Plants.

One Lecture—On the Mineral Food of Plants.

One Lecture—On the Influence of Gases, Water, and Saline Matters, on the production of nutritious substances in plants.

One Lecture—On the Nature of the Chemical Processes in Plants, and the methods of developing them.

One Lecture—On the Comparative Value of Fodders.

Four Lectures—On the Analysis of Soils, in which the methods of determining the quantities of saline and organic matters will be experimentally shown.

Two Lectures—On Mineral Manures, derivable from the geological formations of this and the adjoining States.

The classification of manures, mechanical, simple, complex, and organic; their values, preservation, and collection; the proportions in which they should be applied, &c., will conclude the course.

The Lectures will be delivered in the University of New York, on the evenings of Wednesday and Saturday, at half past seven o'clock. Fee for the course, 5 dollars.

The Lectures will commence on Wednesday, the 27th December, should a sufficient number of Subscribers be obtained.

Subscriptions received at SAXTON & MILES', 205 Broadway, office of American Agriculturist.

SILK MACHINERY FOR SALE.

A quantity of Machinery for the manufacture of Silk, is offered for sale at the State Prison, Sing-Sing, N. Y., consisting of looms for weaving broad silks and braids, together with engines and reels for making cords, winding floss, sewing-silk, and from cocoons; likewise a number of other machines used in the manufacture of silk.

This machinery is now in practical operation at the Prison, and was constructed under the immediate superintendance of an experienced and skilful manufacturer, who still has the works under his charge, and is offered at private sale, between this date and the 15th of February next. If not disposed of at that time, will then be sold at public auction in New York.

For further particulars apply at the Prison, to

WM. H. PECK, Agent.

Dec. 23, 1843. 2t

IMPORTANT AGRICULTURAL WORKS,

On sale by P. L. SIMMONDS, Agricultural Agent, 18 Cornhill, LONDON.

JOHNSON ON FERTILIZERS, published at 12s., reduced in price to 8s., one of the best, most complete, and popular works on manures extant.

THE IMPLEMENTS OF AGRICULTURE, by J. A. Ransome, illustrated by numerous highly-finished wood-cuts, price 9s.

THE FARMERS' ALMANAC, by Johnson & Shaw, for the years 1841, '42, '43, '44, 200 pp., 1s. each. An invaluable handbook, full of sound practical information, and useful to agriculturists at all times, and in all places.

AGRICULTURAL CHEMISTRY FOR YOUNG FARMERS, by C. W. Johnston, Esq., F. R. S., 1s.

A CALENDAR FOR FARMERS, by the same, 1s.

THE FARMERS' MAGAZINE, published monthly, 1s. 6d. each.

MILCH COWS.

We have orders for three first-rate Milch Cows. They must be of good form and size, easy milkers, gentle disposition, orderly in pasture, and from 3 to 6 years old. Grade Durhams would be preferred. State quantity and quality of milk they will give, price, &c., and write post-paid.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 miles, without the State.

ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume 1 of THE AMERICAN AGRICULTURIST, with table of contents complete, for sale at $1; handsomely bound in cloth, $1 25. It is a neat and tasteful book, and makes a handsome premium for distribution with Agricultural Societies; to which, when several copies are ordered, a liberal discount will be made.

☞ To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster,

Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway. New York.

CHARLES STARR, Jr.,

MENDHAM, MORRIS COUNTY, NEW JERSEY,

Is prepared to execute all orders for thorough-bred Berkshire Pigs, from the imported boar Hagbourn, and a superior Boar of Windsor-castle family, and fifteen choice sows, lately procured from A. B. Allen, of Buffalo, New York.

Pigs from this superior stock, from 2 to 3 months old, will be delivered, well caged, on shipboard, at New York, for $25 to $30 per pair. Feed furnished, when desired, at $3 per barrel.

Persons desiring either pigs or full-grown animals, can be supplied with all the advantages of Mr. Allen's stock at Buffalo, without incurring the risk and cost of canal transportation—the advertiser's residence being but half a day's journey from New York.

Woburn pigs of a superior quality also for sale, caged and delivered as above, for $25 per pair.

CONTENTS OF FEBRUARY NUMBER.

EDITORIAL.

Page.
Hints for Choosing Meat at Market, - - - - - 33
The English Oak in America,
Lime as Manure, - - - - - - - - - - 34
Experiments in Agriculture,
Sketches of the West, No. 3,—Ashland, seat of the Hon. Henry Clay, - - 35
Tour in England, No. 17, - - - - - - - - 36
Three-Share Plow, - - - - - - - - 38
Forest-Leaves as Manure,
Management of Stables, - - - - 39
Tools for Boys,
Dr. Gardener's Lectures on Agricultural Chemistry,
Annual Meeting of the N. Y. State Agricultural Society, 40
Management of Yearlings, Our Subscriptions,
Origin of Ayrshires,
New York Farmers' Club, - - - - - 41
Horticulture and Miscellaneous,
Foreign Agricultural News, - - - - - 61
Editor's Table, - - - - - - - - - - 62
Review of the Market, - - - - - - - - 63

ORIGINAL CORRESPONDENCE.

Stock of Peter A. Remsen, Esq., A. S. - - - - 42
The Peach Tree, S. S., - - - - - - - - 43
Hardiness of Durham Cattle, D. B. Birney, - - - 45
Hereford Cattle, Wm. H. Sotham, - - - - - 46
The Wheat of Taos, J. H. Lyman, - - 47
Butter-Making in Orange County, F. J. Betts,
Gravel in Animals, Joseph Cope, - - - - 48
Buckthorn Hedges, B.,
A Mexican Farm, Mexico as it was, And as it is, - - 49
The Best Sheep Country, John J. McCaughan, - - 50
Butter from Sour Milk, B., - - - 51
Experiments with Muck, C. McD.,
Agricultural Colleges, R. L. Allen, - - - - - 52
The Cranberry, B. G. Boswell, - - - - - - 54
Draining Swamp-Lands, J. Thomas,
Worn-Out Lands, A Traveller, - - - 55
Silk-Culture, D. Stebbins,
Culture of Potatoes, &c., - - - 56
Review of Liebig, Gardeners' Chronicle,
Northern Calendar for February, Am. Ag. Almanac, - - 59
Southern do. do. " " " - - 60

THE
AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. III. **NEW YORK, MARCH, 1844.** **NO. III.**

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

TEN THOUSAND SUBSCRIBERS.

If our subscribers continue to flock in for a few months longer as rapidly as they have since the commencement of this volume, we shall soon have the pleasure of recording on our subscription book, Ten Thousand names Paid in Advance for the Third Volume of the American Agriculturist. We had fixed this as our mark in commencing the present year; but we had no idea of being able to realize the number so soon as we now have every reason to hope we may. This speaks well for the agricultural community of our country, and shows that the farmers of America understand their true interests, and are determined not to march *backward.* They can not by any possibility spend a few dollars so advantageously as in the support of agricultural papers. They are their best friends—their best guides—their best instructers—and they also deserve their best support. Indeed, next to their moral progress, the cultivators of the soil owe it to themselves, to their country, and to the world at large, to keep up with the improvements and the discoveries that are continually taking place in the science and method of agriculture; and that man will find himself sadly behind the spirit of the age, and many a dollar poorer, who does not monthly, carefully read and digest at least one good agricultural journal. A political paper in this city says, and we have no doubt truly, that it has received Twenty Thousand additional subscribers to its already large list within a few months. Now will not the farmers of this country do as much for their own profession—the one on which all others depend—and without which the world would starve, as they will for politics?

It is the easiest thing possible to increase the circulation of the American Agriculturist, and even get it up to 20,000 subscribers. One gentleman sent us 28 names last month from one single small town in New Jersey, and he said he should continue soliciting till he had got 50 subscribers for our paper. Would that all who know us would go and do likewise. If every Postmaster in the United States, and British Provinces, would send us *three* names only, we should then have at least 40,000 subscribers. We are perfectly satisfied by a decided effort on the part of our friends that this might be easily accomplished. What a splendid journal we would then give the public. But as soon as we record the number for which we are now striving, namely, Ten Thousand, we shall come out in a still handsomer form than we now present to our readers, together with more illustrations, and if possible, devote more attention to the matter; although, we can say with perfect truth, in all these respects we think we are deserving praise, and merit a large subscription list. Not a single number we issue which does not contain a dollar's worth of information to the farmer, and this is acknowledged over and over again by our correspondents, as we could easily show from their letters, if we did not think it better for our readers to give them useful practical matter, instead of encomiums upon our humble selves.

This journal, in its style, spirit, and character, has ever taken the lead of all others; and this is lately evidenced by the attempted copyings of it both in manner and matter, by those who, before it started, considered themselves first among the agricultural community. In thus doing, they doubtless show their wisdom; but it is a tacit acknowledgement on their part of our superiority—an advantage which we shall be careful to maintain, and thus ever keep ourselves in advance, and justly merit the preference of our countrymen. Who, then, will not be a subscriber to the American Agriculturist, and enjoy while they may, the benefits of a perusal of its pages?

DISEASES OF SHEEP.

Cure for Hoven.—Take ¼ lb. of lard, 1 pint of milk, boil both down to a pint, mixing them well together. Give half of this immediately at blood heat, and the remainder soon after.

Another. Give 1 gill of urine with as much salt as it will dissolve.

Hoven arises from eating an excess of wet clover. This should be avoided by keeping the animals from clover fields which are drenched with rain or heavy dews, especially when particularly hungry.

Cure for Scab.—To 1 lb. tobacco, add 12 qts. ley from wood-ashes of suitable strength for washing, and 4 qts. urine. To this mixture add a second of 1 gill high wines, ¼ oz. camphor, ¼ oz. Spanish brown, and ½ gill spirits of turpentine. The application to be made to the sore, and it has never been known to fail.

Cure for Foot Rot.—Pare the foot well and scrape it thoroughly; then add to a wineglass full of spirits of antimony, a piece of blue vitriol the size of a walnut dissolved in a little urine; rub this well on with a stick. If a sheep is very bad, and foot festering or gangrenous, take the yolk of two eggs, mix with one or two oz. gum turpentine, and stir them till they make a salve. Put on the salve after you have applied the first prescription, and tie it on with a rag or piece of leather.

The last resort for foot rot is butter of antimony, and a few minutes after, apply white lead freely.

Cure for Withers Coming Down.—Wash them with milk and water before returning them—or boil 2 qts. milk with a good deal of lard, and wash them often while putting up.

To Make a Sheep own a Lamb.—Milk all over the lamb and under his tail, and rub it on well, then tie up the ewe head and body.

Another. Rub the liver, and light, and contents of the stomach of the dead lamb over the new lamb, and put the skin of the dead lamb to the adopted one.

Cure for Stretches.—Sheep sometimes stretch out their noses on the ground and around by their side as if in severe pain. This is frequently occasioned by an involution of a part of the intestine within another, called, when occurring in the human subject, *intersusceptio.* Immediate relief is afforded when this last is the cause, by lifting up the animal by the hind legs, and shaking them a few times, when the pain disappears.

All the above are furnished us by a friend who has long been practically engaged in rearing sheep. We solicit a continuation of such from all who are practically acquainted with the subject on which they write.

BENEFITS OF SALT AS MANURE.

We have recently been perusing several European articles, detailing experiments made with salt as a manure, and from them we have made the following brief synopsis of its utility.

It attracts the humid vapors and repels frost, and thus assists in keeping the land moist in dry weather, and warm in cold. It keeps everything in the soil in a soft and soluble state, and assists to digest and prepare the food for vegetable nutrition. It destroys many kinds of vermin and weeds, and usually increases the amount of the crop from one fourth to one third; strengthens the growth of everything to which it is applied, and brings all crops earlier to harvest. It generally adds from 5 to 7 bushels per acre to the yield of wheat used in the most moderate quantity, and in all kinds of grain makes more ear and less straw. Mr. George Sinclair obtained at Woburn, on plots of 36 square feet, at the rate of 70 to 95 bushels of wheat per acre, by the use of salt mixed with other manures. It is found equally beneficial to pasture as well as root crops, sweetening all vegetation, and making it more wholesome for man and beast. It is a great safeguard against blast, rust, mildew, and indeed all the diseases of grain and vegetables.

Salt is inoperative applied near the seashore, where salt water or spray is already in excess on the land; but everywhere else it is beneficial. It may be used at the rate of 5 to 40 bushels per acre, though 10 to 20 bushels is better. It can be sown broadcast on the land, or be incorporated in the manure or compost heap. Mr. Prideaux informs us, that mixed with lime and its compounds it undergoes decomposition, producing soda or its combination with carbonic acid, or with humus; all more powerful digesters and feeders than the salt itself; and the muriate of lime, which has the strongest attraction for moisture of almost anything known. Salt and lime work vegetable matters to decay quicker than salt alone. With gypsum it will supply soda and sulphuric acid cheaper than any other material, besides the muriate of lime, so valuable for its moistening quality.

In 1839 we commenced a series of experiments with salt; but soon after, being called to a distant part of the country, and returning to our farm only at long intervals, they were not carried out with that particularity which they ought to have been. Sufficient, however, was known to prove, that applied at the rate of 10 bushels per acre to grass and vegetables, it made them much more sweet and nutritious, and added as near as it could be estimated, about one fifth to the first crop of grass cut for hay, and full one half to the growth of the aftermath, and increased the vegetable crop about one fourth in its yield.

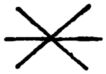
When salt can be obtained cheap we recommend its use. We have seen thousands of gallons of fish and other brine thrown away in our towns and cities, which would be well worth saving and adding to the manure heap.

CULTURE OF HOPS.

Soil.—The best soil for the hop is a gravelly or sandy loam, moderately rich, and if it abound in calcareous matter so much the better. If the soil be too fertile, the hop runs too much to vine, and is troublesome to be taken care of, and the heads, though abundant, grow small; on the other hand, if too poor, unless highly manured, there will not be a sufficient crop to pay the expenses of cultivation.

Preparation for a Crop.—The hop-field should be prepared for a crop by plowing, harrowing, &c., much in the same manner as for Indian corn. In this country, where the land requires manuring, that from the barnyard is usually resorted to. In Europe, they not only use the barnyard manure, but fish, salt, composts of different kinds, woollen rags, and indeed most any fertilizing substances; such as abound in oily matter are sought after with great avidity for dressing the hop-garden.

Roots for Planting.—The best way to obtain the roots is, as soon as spring opens, to plow within a foot of the centre of the hill on each of its four sides, then with a hoe lay bare the roots, and select those only of the last year's growth, cutting them off about 18 inches long. These are what are called trimmings, and are necessary to be taken from the old hop-roots every year, whether required for new plantings or not. As these trimmings will not be wanted for several weeks after cutting, for planting the new hop-field, they can be kept by burying them in a heap in the ground, or by placing them in a cellar.

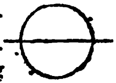
Planting.—After the ground is well plowed and harrowed, strike out the rows 6 feet apart each way, running north and south, and east and west; then take a spade and dig out a hole for planting 8 inches deep, and 1½ to 2 feet in diameter, and if the ground be not already sufficiently rich, put a shovel full or two of well-rotted manure or rich compost into the hole, still leaving it about six inches deep. Now select three roots, and cross them in the hole thus,  and cover them with about six inches of earth, leaving the ground level over them. If not crossed as above when planted, so as to give the roots a compact form in the holes, they spread too much, and send up their shoots in a wide straggling manner, and it will be difficult to confine them within a proper space for poling. About the time of corn planting, or a little before, is the best period for setting out the hop roots. After they are set out, a corn or root crop can be planted between each row.

After Cultivation.—In a week or ten days, the hops will make their appearance, and the cultivation the first year will consist in merely keeping the weeds down, and the ground well stirred, which is usually done while cultivating the crop which may be planted between the rows of hops. Neither hilling nor poling is necessary; for although the vines frequently produce hops, the crop is not worth harvesting.

Management the Second Year.—If the ground be not sufficiently rich, as soon as the spring opens, the hop-field should receive a dressing of rotted manure or compost, spread broadcast between the rows, or incorporated in the hill as is thought most advisable. This last operation is performed by opening the ground a few inches near the roots, and mixing the soil with the dressing. After this the poling is performed as soon as possible, so as not to injure the vines which will soon start from the roots and show themselves above the earth.

Poles.—It is important to have these of as durable a kind of wood as possible consistent with other requisites. Cedar would undoubtedly be the best if it had a thriftier growth. The staddles of chestnut, pine, tamerack, and several other of our forest-trees answer very well, but hemlock upon the whole is preferred when it can be had. They should be cut in the winter season, before there is the least danger of the bark peeling, and from thickets where they grow up smooth, slender, and tall; be about three inches in diameter at the butt, and 25 to 30 feet long. Immediately after cutting, take an instrument made for the purpose, something like the carpenter's drawing-knife, only thicker and shorter, and make according to its size, from four to six slits from one half to an inch wide in the bark, on each pole down its sides the whole length. The object of this is to get rid of all knots, and make the pole smooth for handling and picking. The bark which is left on the pole is necessary in order to keep the hop-vines up; when grown on a perfectly smooth pole, they are apt to slip down about the hill. The poles ought to be cut one year previous to using them, and be placed under cover till they become dry; they are then much lighter to handle, and endure longer. As fast as they are cut, sharpen the end about one foot in length which goes into the ground.

Sticking.—For the purpose of making holes for sticking the poles, a cast-iron bar is used one foot long, three inches in diameter at the top, and running to a point at the lower end. This iron weighs about six pounds, and is cast with a socket in the top, into which a handle three feet long is inserted, and it is far superior to a common iron bar for the purpose designed. The hop rows should if possible always run north and south, and two poles be stuck in each hill, two feet deep, and standing two feet apart on the south-east and northwest sides of the hill thus. The line here is the hop row running north and south; the circle is the hill; and the dots on each side the positions of the poles.



Vines to be saved for Bearing.—Soon after poling is performed, the vines make a rapid appearance, but those which spring up first should not generally be saved for bearing. The reason is that they shoot out of that part of the root nearest to the top of the earth, and though their growth is at first very promising, they do not endure, but soon die; nor are they usually as good bearers as the others which subsequently follow; these should therefore be cut away, or what is better, scrape the earth off slightly from the hills, then break down these first rank vines and cover them with earth; by so doing, they rapidly decompose and become food to the other vines which are left to grow. Another objection to cutting them off is, that they are rather apt to bleed and do the vines great injury.

Tying Up.—Allow two vines to each pole, which would make four to each hill. When the vines get about two feet long, take all those as near the same size as possible, then turn them round the pole with the course of the sun, and tie up. The best material for this purpose is woollen yarn, as anything stronger is apt to injure them. The tyers take an old stocking leg, slip it over the left arm, and thus go through the field performing their work, unravelling the yarn as fast as wanted. The tie must not be a knot properly, but a twist together of the ends. This stays as effectually as tying, and the superiority of the twist is, that as the vine grows, it gradually gives way, and accommodates the thread to the growth of the vine. As the vine above the last joints at the end is very green and tender, and easily injured, it must be tied below these, say between the second and third joints. Every time that the wind blows with any strength it displaces more or less of the ends of the vines, one must therefore go over the field when these occur, and replace them around the poles, and add more ties if necessary. When the vine gets so high that it can not be reached from the ground, a step is used to get at them, or what is better, as the work is rapidly executed, mount a steady horse, and thus ride through the field tying up.

After Culture.—Immediately after tying up the vines, start the plow, and give a sufficient number of furrows each way between the rows: then follow with the hoes, cutting up all the weeds, and slightly hilling. Each hoer should have the stocking leg on his arm, prepared, after finishing hoeing, to tie up any vine which may need it. The second or third time hoeing, precede with the cultivator, and finish off with the hoe, not hilling this time, but leaving the ground as nearly level as possible. Any poles falling down should be immediately set up again; otherwise, by lying on the ground the hops rot and become worthless.

Picking.—For this purpose a box is used 10 to 15 feet long, 3 feet high, 2 feet wide at the bottom, and 3 feet wide at the top. This is formed by making a light frame first, and then nailing pine boards to it. A handle is placed at each end of the box so as to be able to move it easily about. At the time of picking, this is carried into the field, and a naked pole placed on the middle of each end, running the whole length of the box, for the hop poles to rest on crosswise when picking.

In September, as soon as the hops begin to turn a little brown, and before the heavy frosts set in, the picking commences. Cut off the vines near the ground, pull up the poles as fast as wanted, and commence picking, taking care to keep the hops in the shade as much as possible, otherwise they wilt rapidly and lose strength and color. For the same reason the poles ought not to be taken up faster than wanted for picking. Pile the poles in convenient heaps with the vines on as fast as stripped of the hops. At noon, all the hops which have been picked in the morning are taken to the kilns for drying; and at night, all those picked in the afternoon. If left longer than a few hours before being put to drying, they are apt to heat and become injured.

The season of picking is a very jovial one among the rural population. It must be done in fine weather, and as it is light, pretty work, all the girls of the neighborhood turn out for this purpose: their part of the work being to pick the hops from the vines, while the young men pull up the poles, pile them away when stripped of their burden, and move the boxes from place to place. Songs and tales lighten the labor, and a general merriment prevails. We have known quite as many sturdy swains' hearts lost, and fair maidens, too, during the hop-picking season, as at apple-parings, huskings, and quiltings.

COCUS ON ORANGE-TREES.

We hear of the continued ravages of these little insects at the south, and are again called upon by our correspondents for remedies. We know of nothing more effectual than syringing as recommended page 54 of our second Volume, and for this purpose pure water is said to be just as good as that mixed with ley and soap, or ammoniacal liquor. All that is necessary is a good garden engine, with which one person can throw a column of water 60 feet horizontally, or 50 feet perpendicular, and completely inundate a large orange-tree in five minutes. The cost of these here is $45, and they are very strong and complete, and will last a long time—being worth a dozen of those sold from $15 to $20, in their effect and duration. A correspondent from Florida informs us that saltpetre destroys them, when sulphuric acid has been tried in vain. He does not give the method of applying it. We request the attention of our southern friends to smoking, as applied by S. S. on peach-trees. See page 74 of this No. Syringing we believe the most effectual method if followed up perseveringly with the garden engine.

SUBSOIL PLOWING.

We are highly gratified to observe an increased attention to subsoil plowing, for we consider if it could be generally introduced among us, it would be found one of the greatest agricultural improvements of the age. In volume I, page 199, we gave full details of the successful operation of the subsoil plow in England, where it was shown, that by its use, crops may be doubled without adding a particle of fertilizing materials to the land. Two years subsequent experience by the farmers of that country, corroborate the benefits to be derived by the free use of the subsoil plow, for grain as well as root crops. Mr. Tilley recently asserted before the Cornwall Agricultural Association, that he had the past year raised hundreds of roots of mangel-wurzel, weighing 25 lbs. each; that the crop of these per acre, as well as carrots and turneps, was at least doubled by subsoil plowing.

Five years ago we had a piece of land containing 2¼ acres of a hard clay soil, which, with the best management we could bestow upon it, yielded less than 150 bushels of potatoes to the acre, and 400 of sugar-beet—while parsneps, carrots, or any long roots, it would scarcely grow. We had just heard of Mr. Smith's subsoil plow in Scotland, and determined upon an experiment. We had no plow of this description, nor could we then obtain one; we accordingly took the mould-board off from a large, strong road plow, and used the point of the share alone for subsoiling. We plowed the land in the fall of the year, by taking a common plow and one yoke of cattle, and turning over a surface furrow six inches deep. We then followed directly after this in the same furrow, with three yoke of cattle attached to the road plow, stirring the soil eight inches deeper, making fourteen in all. This we then bountifully limed, and the next spring as bountifully manured and planted it with roots, and the following autumn obtained over 1,100 bushels of sugar-beet to the acre from it, and other crops in proportion.

Subsoil plows may now be had in this city, of excellent pattern and strongly constructed, from $10 to $15 each, which will stir the earth from 12 to 18 inches deep, requiring from two to five yoke of cattle to move them, according to the nature of the soil, and the depth required to plow.

MARL.

We occasionally hear of the ill-success of applying marl to land, and have recently read an account of quite a noted instance of this kind in South Carolina. Now marls vary greatly in their composition, and must be judiciously used, or they will do injury rather than good. To a sandy soil, clay marl is the best; and to a clay soil, such as abounds most with sand should be applied. Sometimes the land has already lime enough in it; under such circumstances, marl abounding largely with lime may be a misapplication; again, the soil to be fertilized may be greatly deficient in lime, and the marl which is applied to it equally so; it would be preposterous to expect, then, that the marl would prove of any benefit unless it contained other fertilizing substances. Any one can easily tell from the appearance of marl whether it abounds most with clay or sand, and if they discover a considerable quantity of shells in it, those of course are nearly all lime. When the lime is so finely mixed in the marl as to be imperceptible to the eye, its presence can be ascertained by putting a small quantity of it into a tumbler or wine-glass, and pouring a little muriatic acid, spirit of salt, or vinegar upon it, then if there be any boiling up, or rising of bubbles of gas, it contains lime. So small a quantity as ten per cent. of lime in the marl can be thus detected, especially with muriatic acid. Previous to applying marls, however, they ought to be carefully analysed by a good chemist. We have known persons expend $50 worth of labor in misapplying marl, when an analysis of it would have only cost them $5, and they might thus have saved $45. Where marls abound, and their certain effects are not already known, and no person is in the neighborhood capable of giving an opinion upon their merits, it would be well for the farmer to make an application of them at first on a few square rods only of land, where different crops are growing. He must not, however, be in a hurry to decide upon the merits of the marls thus applied, as their full effects frequently do not show themselves till the second and third years.

If our farmers would form themselves into clubs or associations, each contributing the small sum of one dollar a year, they might not only have the benefit of analysis of soils, but many other things. Political clubs are forming all over the land, and the people going half crazy with the idea of who shall be our next President. This to be sure is an important matter, especially when vital principles of government are concerned in the election; but is not the advancement of agricultural knowledge equally so? May we live to see that day, when the great mass of the farmers of the United States will feel the necessity of informing themselves by books as well as by practice of all that regards their vocation.

CULTURE OF ASPARAGUS.

Since the Spanish method of cultivating asparagus by the seashore has become known in England, a complete change has taken place in the manner of growing it there, salt being added now in moderate quantities to the manure used to enrich the beds; it is also spread broadcast upon them, at the rate of 1 to 3 lbs. per square yard, after forking them over in the spring. This makes it much more palatable and tender. The month of April in this climate, or soon after the frost is well out of the ground, is the best time to apply the salt dressing to the beds. A compost of horse manure, mixed with leaves and vegetable mould from the woods, together with a little charcoal, is one of the best manures we ever made use of for enriching the asparagus bed.

Visiting Dr. King's fine farm at Perth Amboy, last summer, we were walking with him one morning along its boundaries on the bay, when within a few yards of the water on a slight ridge of sand, which was subject to be wet by the salt spray, and inundated by a high tide, Dr. King pointed out to us a natural asparagus bed; and although it was late in the season for this vegetable, and most of this before us too much grown for good cuttings, upon our mentioning to him the Spanish method of cultivating it, he directed some of this to be cut and cooked for dinner. To our surprise, notwithstanding it was so old, it proved very delicate and palatable, and completely satisfied us that its superior taste was owing to the salt dressing it received from the sea-water. Gardeners, in the interior of the country, will do well to try the experiment here recommended with salt; it will cost but a trifle, and do no harm if it produces no good. We scarcely recollect eating delicate asparagus in the valley of the Ohio; it was generally of large growth, tough, and bitter, and none that we ever tasted at the west, did we find to possess the peculiar flavor of that growing naturally at Dr. King's.

New York Farmers' Club.—Two regular meetings took place on the first and second Tuesdays of last month, which were more numerously attended than usual. Dr. Gardner has been appointed consulting chemist for the Club. At the first meeting Mr. Meigs read an able article, translated from a recent report made to the French government, upon the cultivation of tea in China. Much interesting conversation followed on various subjects, when Mr. Barbour, from Massachusetts, gave a detailed account of the success of the silk culture in the west, (where he has just been making a tour,) particularly at Economy, Pennsylvania, and Mount Pleasant, Ohio. Open-feeding is prevailing, and is found to answer well. At the second meeting, manures was the principal topic of conversation. Dr. Stevens gave some curious statements upon the subject of caponising fowls, he having recently made several experiments on turkeys, ducks, &c.

The reports of the Club at full length, are reported in the Brother Jonathan, one of the best family newspapers in this city, published weekly by J. Winchester, No. 30 Ann street, and most ably edited by H. C. Deming, Esq.; price $2 a year. We must refer our readers for more particular accounts of the doings of the Club to this journal.

Salt as Manure.—After our article page 66 was in type, we received No. 31 of the New England Farmer, in which we see that Mr. Wells has used salt as manure for several years. He found by various experiments, that when applied at the rate of 40, 30, 20, 15, and even 10 bushels to the acre, sown broadcast upon the land, it destroyed the vegetation. At the rate of 4 to 5 bushels per acre it proved very beneficial. He recommends mixing the salt with compost heaps as the best method of applying it to the land. Notwithstanding these experiments of Mr. Wells, we are confident that on certain soils, and an inland situation, 10 to 20 bushels, or even more, of salt per acre may be beneficially applied, especially when mixed with the manure or compost heap, and suffered to lie a sufficient time to become incorporated with it.

Lime as Manure.—In addition to the good effects of lime as a manure, expressed by us in our last, it greatly improves the *quality* of the crops where used, making the grass and roots less watery, and gives a greater proportional quantity of farina to the different kinds of grain. It also hastens the ripening of the crop, especially when it is a seed one. It warms the earth, makes the climate more salubrious where used, and adds to the general health of the people of the district. We can not too strongly impress upon the farmer the utility of extending the use of lime upon his land where it has not already a sufficient quantity in it. We shall continue to revert to this subject in short paragraphs.

Much larger quantities of lime would be used as manure in this vicinity, could it be had at a cheaper rate and at more convenient depots. We have many inquiries as to price by the quantity for this purpose, and among others, by the farmers in the vicinity of Miller's Place, near Brookhaven, Long Island. Will those who have lime for sale please answer?

Harrowing Grain.—We have often found great benefit in harrowing winter grain in the spring of the year, as soon as the ground is well settled and dry, more especially wheat somewhat winter killed. It stirs the earth, encourages tillering, and adds to the vigor of the growth of the plant. The harrow should be followed by the roller, so as to replace the roots of the plants which may be laid bare by the harrow, and crowd them into the earth. It is hardly necessary to add, that the harrow should be light, with short, fine teeth. Among the German population of this country, we have seen wooden tooth harrows frequently made use of for this purpose; they asserting, that the teeth were not so liable to injure the plant. We believe that barley, oats, and all spring crops of grain may be harrowed to advantage, whenever the surface of the ground becomes somewhat hard and encrusted, which all clay soils are liable to after a hard rain. Harrowing the hemp crop under such circumstances, we were informed in Kentucky, has been found highly beneficial.

The American Agriculturist for Gratuitous Distribution.—The Hampshire, Hampden, and Franklin Agricultural Society of Massachusetts, has ordered 25 copies of our paper for gratuitous distribution among its members, with a view of giving a stimulus to an improved system of agriculture. We have also 75 copies ordered among the different societies of this state for premiums. We hope that this will be an incentive for others to go and do likewise. In all such cases we shall put our paper at the lowest possible rates at which it can be afforded.

Multicole Rye.—We beg to acknowledge the receipt of a small quantity of this rye from the Hon. H. L. Ellsworth, of the Patent Office Washington, with the following description of it labelled on the package: Imported from France, said to be different from common rye; sow in June; its growth very rapid. The straw is from 8 to 10 feet high, and the ear 10 to 11 inches long. It can be pastured during summer, fall, and winter, and then a good crop taken the following year. It is believed to be midsummer rye of Poland. The weight is 58 lbs. to the bushel; it is said to yield a good crop for dry fodder in the spring, without hurting the crop of rye. The kernel is small.

We gave some account of this rye, page 30 of January No., and have distributed the seed sent us by Mr. Ellsworth among our friends for experiment this season.

THE PEACH-TREE.

(Concluded from Page 45.)

If a farmer neglects his orchards and his garden, and raises weeds, caterpillars, and vermin, which are either blown, or creep, or fly into his neighbor's grounds and destroy his crops, his fruit, or his trees, he should be looked upon as a bad citizen. In fact, the old law of Connecticut, which allowed the selectmen to warn any bad citizen to leave the town, could with propriety be made applicable to him. He should go where he could not hear his neighbor's dog bark, and then he might keep his garden as he pleased.

The toads and frogs should be domesticated, and convenient places left for their domicils, flat stones raised above the ground for instance, will be good places for their retirement. The toad is probably the most valuable of all bug-destroyers, for he does not, like the frog, require water, and will soon come to be fed. The toad has a large progeny, and the frog still larger, called tad-poles, which grow without care or protection from the mother. They are both great devourers of insects, and the latter particularly of beetle-bugs, one variety of which is the curculio, which produces the peach-grub. Some people recommend swine to eat up the fruit to destroy the grub; the toad does more, he not only eats up the grub, but also eats up the beetle which produces him, and thus he wars on both. The toad is the gardener's friend and assistant, and unlike birds and poultry, he does not eat up or scratch up what the gardener values. He will be a hard-worker in a good cause, and should be valued for the good he does. One or two hundred of these valuable quadrupeds in a garden of an acre, would do much to keep your grounds clear, and most gardens are so fenced that you could keep them in, but good shelter and kind treatment would make them value your grounds, and indispose them to stray, even if they could. Crumbs of bread after getting wet are a favorite food, and by giving them these, they will appreciate your kindness. You can assist their carniverous appetite by shaking the rose bugs from your grape-vines, rose-bushes, and trees. If you will spend the time (which if you are a *gardener* you now spend, destroying the bugs in your melons, cucumbers, cabbage, and caulliflower plants,) cutting out grubs from your trees, and in introducing the *different preventives* to the growth and existence of insects, I think your grounds may be cleared.

Poultry is a destroyer of insects. A hen with her dozen chickens, does immense destruction to all flying and creeping insects of the garden, and if you break up your grounds near your poultry, you immediately have them all leave their other food, and follow the plow to pick up the grubs and worms. Who can estimate the advantage the poultry has done him? Did you ever see an orchard lost? Yes. Did you ever see one saved? Yes. If you conclude the plowing and the destruction of the grubs, saved or greatly helped to save your orchard, you will not be far from right.

But you object to let the hen and her chickens go into the garden. So, Madam Hen, how did you dare go into the garden? You must be tried. You and your chicks are charged with maliciously entering the garden, and when there, with malice aforethought, scratching up, and in several instances, actually destroying divers valuable vines and plants—you must be tried—what say you, Madam Hen?

"Not guilty, and ready for trial. Now may it please your honor, I am rearing like a slave, a brood of chickens for my master to eat; he has no fences to keep us out, and withal, leaves us very hungry, and I went there for food—fences are the only laws we understand. Your maxim, *ignorantia legis excusat nemenen* (ignorance of the law excuses no one) is no law for hens. But I scorn to take advantage of such plea, and shall show that instead of destroying plants I save them. I admit that early one morning in May I entered the garden with my chicks; the first bed we passed over was a strawberry bed. We did not even stop to eat the berries, we found no insects there. The next was an onion-bed, we found no insects there, and I clucked my chickens on. The next bed was early York cabbage and cauliflowers. Before getting there, I saw a dozen plants full of maggots half an inch long, pulled and thrown away in the walk. Said I to myself, what a pity I had not been in the garden sooner. I called my brood, we soon devoured these maggots, for they could not get into the hard ground of the walk. I clucked and entered the cabbage and cauliflower bed; here was a sorry sight. Half of the plants kept over all winter had dropped their heads. I saw the grubs had crawled under ground, their holes were quite perceptible close to the root of the plants. I got ready, gave three clucks, and every chicken was at its post. I then committed the heinous offence charged. I scratched, I exposed the grubs, each chicken took one and ran, they were soon back for more; the largest and the worms, I ate myself. I saw an angle-worm too, very large, but my two biggest chickens got hold of him, and each pulled so hard, they broke him, and each swallowed the half. I looked on with silent satisfaction, but just at this time the gardener let fly a stone. What a pity thought I, but clucked a retreat, on the principle of "obeying orders though you break owners." I passed several beds, finding no worms or bugs. I stopped at the melon-beds; at the first hill I saw the rose and flea bug. I clucked, the chicks made short work of them. The black fleas were so nimble that some got into the crevices of the ground, and I admit I here gave a scratch or two, while the chicks picked up the bugs and worms. Here the gardener, to be more sure, sent a stick which hit me and came near killing two of my chicks; but I screamed and ran out of the garden, and my chickens in part after me, and part dodging all over the garden. I called for an hour before I could collect them. While running out, I passed under the Isabella grape-vine, saw any quantity of the rose-bug on the ground, ready to be devoured; then we passed a cherry-tree, the ground covered with decayed cherries, and the worms crawling out to go into the ground for another year. With the best intentions I thought it my duty to submit; but I frequently looked through the fence and saw the early York cabbage and cauliflowers (the grubs are dainty folks,) all destroyed. I saw the melon-beds three times planted, nor did a hill grow until the bug and fly season had passed—the frost came and destroyed the vines before the melons were ripe."

Madam Hen alleges that at the time complained of, the crop of each chick had a thimble-full of grubs and bugs, and that her own had a half pint; that they would have produced millions of insects the next year. With these remarks she submits her cause.

We must not pass by the quacking flat-footed birds, and against the duck the surly gardener can make no complaint of scratching up the ground; they, the young ducks especially devour insects most greedily.

The carniverous birds are also great destroyers of all grubs, worms, and flying insects. In fact, Providence has created them apparently only for such purposes; but men and boys have determined they can kill them for their amusement, and can do without them, as their flesh is not esteemed good, and is seldom eaten. On our eastern Atlantic border, and for some extent in the interior, the birds have been fast disappearing, while the insects have been rapidly multiplying. The last season we hear of the destruction of the potato crop in whole counties; grubs or insects will be found in some manner to have produced the rot in the potatoes, perhaps by poisoning the sap of the stalk as the sap of the peach-tree is poisoned, by boring the bark.

The charge against the garden birds is, mainly, that they eat cherries, and for this offence a boy is praised for shooting poor robin, whose nest is perhaps filled with young. The destruction which the robin and cat-bird make of worms, beetles, and insects, should, if not for their song, make them sacred birds. They help themselves mostly from the extreme ends of the twigs, perhaps because they know the owner of the tree can not reach them. All the wrens and chipping-birds, swallows, martens, black-birds, &c., do great destruction, and most of them live entirely on insects. To retain these birds, no shooting of them should be allowed, they do a hundred-fold more good than mischief. There should be a law against *capital punishment*, as applying to *them*, and every convenience for their nests should be supplied, and children encouraged to feed and domesticate them.

The crow, too, is a great destroyer of worms and insects. It is said that estimating that their food is only one half of the above kind, that then a hundred crows devour in one season *one and a half tons of worms and insects!*

Certain manures engender insects more than others. Ashes, alkalies, bones, salt, plaster, and lime, poudrette and the artificial chemical manures, the least; horse-dung probably the most. But with all our *preventives* we shall have insects, and war must be carried on against them.

A good general frequently attacks his enemy while in winter quarters; therefore, if not too late, immediately dig round, or if an orchard, plow up the ground; the grubs and lice, (for we have seen some of them live in the ground,) would be turned up in a torpid state to be eaten by poultry and birds, or killed by frost. Salt, too, might with great advantage be sprinkled about the trees on the top of this new-turned earth, being very destructive to worms, and a good manure. Your grocer will let you have it cheap from his fish and pork-barrels; salt with fish and lard oils, are both excellent. The quarters referred to are but the outposts, the main body of the enemy is snug in winter quarters in all the crevices of the bark, and under the bark. These barracks and citadels are to be warred on. A little sapping and mining at the root is first necessary, and you may be certain to be on their trail, if you see the red sawdust; a sharp knife opens a passage for you, where, if you can not knife him, follow on with a wire, and be not satisfied until you bring part of him out. Repair the breaches you have made by plastering them up; the bark will soon heal, and the tree be not seemingly injured by the attacks.

Our most difficult duty is still undone, the eggs of the plant-lice, (different species,) are still to be destroyed; the producers of the *yellows* go yet unscathed—they are now in your trees, in the places described. One thing is fortunate, they can not get out before spring, they can not crawl nor fly; will you let them remain there? Most of them lie well covered with bark; some lie in a web-like covering on the bark, and others conch and scale-like, the last perhaps the same insect that you see always (I may say) on the oleander of the green-house. If the bark is old and tough, and particularly, if in part peeled off or risen up, I would take, if a small tree, a knife, if a large tree, a drawing-knife, and cut the outside rough bark off. Many eggs and embryo worms will fall to the ground exposed, and be destroyed; what remains are most probably still in a position to exist. Moss, if any on the trees, should of course be removed.

The subject is now ready for treatment, it is stripped. Mr. Farmer, suppose a boy had a similar disease, what is your remedy? Rub him well down with grease and brimstone before a fire; the megrims die in the skin, the boy jumps into bed; in the morning washes himself for fear of the disease being known, and all is well. The diseases are both of the *skin*, they are both insects, the application may well be similar. The poor cow too, and sheep, have brimstone and oil applied for the like purposes.

I am aware that some farmers say fish oil will kill the trees. I do not believe it. In August last I put rancid butter and pure fish oil on two pear-trees, each decaying, and having grubs at the roots. Being on quince stocks, and not valuing the trees, I drenched them well; the inner bark of the one saturated with butter soon became of a beautiful pea color, and lifted up, by its expansion, the old bark, where that was not taken off; the old bark became soft and spongy which was previously like metal; the two or three months of fall was all my experience with this tree, but it was enough to convince me that the application was very efficient. The green also showed itself on the inner bark, on the tree to which the oil was applied, but later in the season. I believe the applications to be about equal, except that the butter had the advantage of salt. We all know that animal fat, grease, and fish-oil, are highly offensive and disagreeable to all insects which are graminivorous and herbaceous, and we know they are concentrated excellent manures. We have the authority of Judge Buel, that oil will drive the insects from the trunk and branches. Mr. Thorp of England recommends three parts of rosin to one of oil, put on warm with a painter's brush.

Harris recommends scraping and brushing down with potash, soft soap, salt, or pickle, and tobacco-juice. All these are good, and produce effectually the same results: but any animal fat or oil with salt, I should prefer, they are very penetrating; the bark is a great absorbent of oil and grease. Soap-fat and salt are always to be had at a reasonable value. If tallow or lard compose the fat, it should be warmed; in fact, artificial warmth, except of an August day, is desirable. Recollect, this medicine goes far, a small lump of grease covers a great space, the application should extend as far as possible to the limbs. Gas-water, and gas-tar, are recommended by the English books, but they must be greatly diluted, for these refuses killed the fish in the Thames at London. Lime and soft-soap have been recommended, put on as white-wash; the experience of the writer is against such application of lime; the lime is probably too absorbent of the sap, and fills the pores.

The English authorities assert that some of the varieties of the lice are found on the extreme ends of the twigs, the injury to the entire tree is probably much less there, but they too should be reached.

I now come to the last of the remedies, without which, much as I value the preceding suggestions, I fear the tree can not be preserved. I refer to fumigation; that the roots can be preserved, that the bark and large limbs can be scoured by the washes, I verily believe; but the tender twigs and leaves, and fruit, are to be protected. Watering, shaking, and dusting them with snuff and sulphur, are ineffectual remedies in practice, however good in theory. Smoking, as a remedy, particularly for lice, is well known. A few minutes' smoking brings them from the rose and other plants to the ground; a second smoking clears a green-house; the conservatory, and green-house plants could be hardly preserved, except by smoking. The smoking, therefore, must be admitted to be a complete remedy against (I had almost said) the only enemy the peach-tree has. But it will be said, you can not smoke an orchard. I admit the *difficulties*, but it is by no means impossible. You have the material, say tobacco-stems, cheap, or better yet, raise your own tobacco—raise an excess of peppers—purchase a pound of sulphur. I fear I hear some say you have got the salt, but "you have got to get it on their tails." I don't despair—a peach-tree is seldom, now-a-days, over 12 feet in height, and 12 feet in diameter of limbs and foliage. We will look in the face our most difficult patient first.

Procure an old tin or sheet-iron vessel, similar to a smith's or plumber's furnace, having a small aperture near the bottom, and open at top, or an inverted light wooden bee-hive, for but little fire is required to make smoke. Secure this furnace or box to a pole 4 or 5 feet long, flinging first a few dull coals in the bottom, or very hot ashes—then throw in your tobacco, sulphur, Cayenne pepper, &c. Select a damp day in spring or summer, and still weather if you can, and smoke the tree well, and the lice will fall, and the insects which you do not kill, shake from the tree. The first puff of smoke will make most of them loose their hold; move your furnace so that the smoke will reach every part of the tree, sometimes raising and sometimes lowering it, and, if any wind, go to windward. The writer believes a man could not breathe such fumigation many minutes—he would fall. Other more deleterious substances might be applied. The insects referred to, in spring and summer are all life; some have wings, the males particularly, and would, if possible, leave the tree. I think they will be generally killed; but one thing is certain, *the tree will be smoked.*

All insects are particular as to their food. The grub which greedily devours the quince-stock, when used to graft pears on, will not touch the natural pear-stock. It does not agree with Linnæus that they are both the same thing. It is said the brimstone butterfly has been known to fly hundreds of miles to select a shrub, the leaves of which her grub progeny like to feed upon. Now, would any of the insects referred to go to a tobacco, brimstone smoked tree to lay their eggs and rear their progeny? A segar only, will make curtains smell for several days, and a ham never loses its smoky flavor when only wood or cobs are used. The soft and porous leaves readily absorb the smoke fumes of tobacco and sulphur. We of New York do not breathe pleasantly when brush is burnt in New Jersey. I have, I hope, convinced my readers that *much advantage*, at least, may be had by such applications. But I will give them an alternative more troublesome, but more in fact, quite certain.

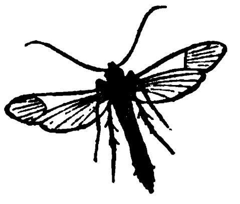
The last spring I tried the smoking materials above described in a green-house; everybody in the dwelling-house which was only adjacent, coughed and sneezed most violently. I was almost suffocated, being for a moment in the green-house. I gave it up for that day. The next day I took the plants out of the green-house, and had them brought into the yard; some were 6 or 7 feet high, and set on top or on the side of one another. This made a small stack of plants, perhaps 10 feet high, by 8 or 10 feet in diameter. I then took two table-cloths, laid them one on each side of the stack, covering it up to the top, and put two or three pins in the cloth which reached to the ground. I had a good smoke-house, and the whole worked to a charm and no mistake in it. The smoke, ascending through the stack, came down and escaped at the highest open space. After a little while I closed such openings and made others, and sometimes opened the cloths near the top, by which means the current of smoke was carried in different parts, smoking all alike.

Now I recommend the same application to the 12 by 12 peach-tree, with some little modification.

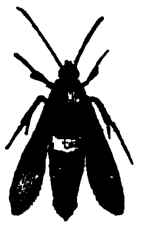
On the first bursting of the buds and starting of the leaves, procure some cheap cotton-cloth, cost 4 or 5 cents per yard—50 yards might be required to make a tent-like covering for the tree. Open at one side, and when the tree was enclosed, let the sides be brought together. The extending it over the tree might be assisted by a pole of 12 or 15 feet in length. If the tree is 12 feet high, and the limbs and foliage 4 feet from the ground, there would be 8 feet to be covered, say 4 yards on each side at bottom, and 4 more at top; costing, say $2.50. A hogshead-hoop, and attaching the falling folds to it, would facilitate the operation. A pole stuck in the ground and the tree supports it all. Boys could now do the smoking—less than 30 minutes would suffice, or 25 trees might be smoked in a day. Each tree of such size ought, on an average, to yield three bushels, and be worth, to a private family, or in the market, a dollar a bushel. If we estimate a man and two boys at $1.50, use of materials at 50 cents, is $2, twice repeated, each tree or 3 bushels of peaches would cost 16 cents, or 75 bushels $4. I am supposing you have now got the trees, and they do not bear. This is certainly much cheaper than to buy trees, plant them, and have them occupy the ground, and produce nothing. If you have large orchards you can afford to do your work with a handier contrivance.

Erect a slight frame twenty feet square, and fifteen feet high, so as not to require sleepers on two sides. Enclose and cover it, (conically in part,) transport it with your ox-cart or wagon from tree to tree, covering them; if it requires strength on the open sides, shifting-bars might be used, and slight drop-curtains completely enclose the tree. Our trees can only be relieved from *all their maladies* by smoking! particularly the highest-priced fruit of the market—the plum. A winged beetle pierces the fruit, the grub grows in the fruit and it drops, while the tree is remarkably healthy. Now to smoke this fruit once or twice, you would make the tree and fruit offensive to the beetle, and he would go elsewhere to deposite his eggs.

BORER.—(FIG. 9.)



MALE.—(FIG. 10.)



FEMALE.—(FIG. 11.)

I send you cuts of the peach-tree worm, which I copy from those furnished the Boston Plowman, by Professor Harris, of Cambridge. Fig. 9 represents the worm or borer; fig. 10 the male, which has yellowish wings; fig. 11 the female.

The eggs are deposited in the summer near the root; the grub destroys the bark. These grubs are so well known and described, and their injury is so trifling (in comparison with the lice) to the peach-tree, that I do not more particularly dwell on them; and I have to express my regret at not being able to figure the different descriptions of plant lice. I do not find them figured in any European or American work at my command; they are in fact so small as to make it difficult to do so. The plant louse of the rose-bush, known to everybody, sometimes seen on the peach, is the only kind that is particularly known, but it is said the others are not very dissimilar. It is not material, however, in the application of the remedies recommended for the orchardist, to have a minute knowledge of these small but numerous and destructive class of insects. In fact it is believed no insects are so numerous. We may thank Providence none have so great a number of enemies to keep them in check, otherwise the globe would be covered with them. In addition to numerous insectiverous birds, various bugs, spiders, beetles, and wasps, destroy great quantities. And the larvæ of the lady-birds, and small turtle-back and spotted beetle of the bee-like insect, and of golden-eyed flies, and small ichneumon fly, exist on them. The larvæ of these insects are in Europe collected and put on plants to destroy the aphides or lice,* and they do it most effectually, some of the species depositing an egg, which becomes a maggot, in their bodies.

> 'Thus fleas have little fleas to bite 'em,
> And so go on *ad infinitum*."

S. S.

GOOD EFFECTS OF PLASTER.

A FARMER informed me, that in one corner of his pasture, near his watering and salt troughs, his cows used to drop considerable manure; they were also milked during the summer months in the pasture, at and near this spot, so that the land of half an acre had became very rich. The grass grew large, but nothing would eat it. He gave it several dressings with plaster, since which the cows have fed it down as close as any other part of the pasture.

I know a gentleman who keeps a select herd of Short-Horns near Philadelphia; his pastures are small, the feed luxuriant, and he changes them often from one to the other, and sends a man every day to sprinkle plaster wherever any manure has been dropped, and his statement of its efficacy in

---

* Just after sending my article to press, I find the following account of the increase of the Aphis lanigera, in a late work by Professor Owen, on Comparative Anatomy.

"The Aphis lanigera produces *each year* ten viviparous broods, and one which is oviparous, and each generation averages 100 individuals.

1st generation 1 aphis produces

2d	100	hundred.
3d	10,000	ten thousand.
4th	1,000,000	one million.
5th	100,000,000	hundred millions.
6th	10,000,000,000	ten billions
7th	1,000,000,000,000	one trillion.
8th	100,000,000,000,000	hundred trillions.
9th	10,000,000,000,000,000	ten quatrillions.
10th	1,000,000,000,000,000,000	one quintillion.

"If the oviparous generation be added to this you will have a thirty times greater result."

making the grass palatable for his stock, corroborates the above, and that the cattle eat all the feed equally, and he thinks the expense of the plaster abundantly paid by fixing the ammonia in the manure, and preventing its evaporation.

A mechanic had a piece of land which he purchased at a low price. It was covered with shrub oaks so thick, that one of your alligators or landpikes would have found a hard tustle to have worked his way through them. He hired an Irishman (the best of all laborers for such work) to grub them out—planted it with potatoes, and the next year after he had a large crop. He then sowed it down to timothy and clover, seeding heavily. It has produced for the last five years from 2 to 2½ tons of hay per acre, at one cutting. He has plastered this land every year, and fed off the rowen. The past season he planted it with potatoes, had a large crop, and next year he hopes to get 100 bushels of corn per acre from it.

A Traveller.

SHEPHERD DOGS.

Speaking of dogs, I think the shepherd's dog the most valuable of his species, certainly for the farmer. Our dog Jack, a thorough-bred Scotch collie, has been worth $100 a year in managing our small flock of sheep, usually about 700 in number. He has saved us more than that in time in running after them. After sheep have been once broken in by, and become used to the dog, it is but little trouble to manage them; one man and the dog will do more than five men in driving, yarding, &c. Let any man once possess a good dog, he will never do without one again.

The sagacity of the shepherd's dog is wonderful; and if I had not seen so much myself, I could hardly credit all we read about them. It is but a few days since I was reading in a Scotch paper a wonderful performance of one of these collie dogs. It seems the master of the bitch purchased at a fair some 80 sheep, and having occasion to stay a day longer, sent them forward and directed his faithful collie to drive them home, a distance of about 17 miles. The poor bitch when a few miles on the road dropped two whelps; but faithful to her charge, she drove the sheep on a mile or two farther—then allowing them to stop, she returned for her pups, which she carried some two miles in advance of the sheep, and thus she continued to do, alternately carrying her own young ones, and taking charge of the flock, till she reached home. The manner of her acting on this occasion was gathered by the shepherd from various persons who had observed her on the road. On reaching home and delivering her charge, it was found that the two pups were dead. In this extremity the instinct of the poor brute was yet more remarkable; for, going immediately to a rabbit brae in the vicinity, she dug out of the earth two young rabbits, which she deposited on some straw in a barn, and continued to suckle them for some time, until they were unluckily killed by one of the farm tenants. It should be mentioned that the next day she set off to the place where she left her master, whom she met returning when about 13 miles from home.

The anecdotes of their sagacity are innumerable, and truly wonderful.

I purchased a bitch of the *tailless species*, known as the English drover dog, in Smithfield market some two years ago. That species is much used upon the Downs, and are a larger and fleeter dog than the collie. We raised two litters from her, got by Jack, and I think the cross will make a very valuable dog for all the purposes of the farmer. They learn easily, are very active, and so far they fully answer our expectations.

A neighbor to whom we gave a bitch of the first litter would tell her to go into such a lot and see if there were any stray cattle there; and she would go over the field, and if there were any there, detect them and drive them down to the house. He kept his cattle in the lot, and it was full 80 rods from the house. The dog was not then a year old. We had one of the same litter which we learned to go after cows so well, that we had only to tell him it was time to bring the cows, and he would set off for them from any part of the farm, and bring them into the yard as well as a boy. I think they would be invaluable to a farmer on the prairies. After raising two litters, we sent the bitch to Illinois. I hope farmers will take more pains in getting the shepherd dog. There is no difficulty in training. Our old one we obtained when a pup, and trained him without any trouble, and without the help of another dog. Any man who has patience, and any *dog knowledge* at all, can train one of this breed to do all that he can desire of a dog.

T. C. Peters.

Darien, January, 1844.

We hope that Mr. Peters will now send us the price of his dogs if he has any for sale, for we shall have a dozen inquiries within a fortnight after the issuing of this No. Well-trained shepherd or cattle dogs in this vicinity are worth from $25 to $35, and scarce at that. Puppies 3 months old, from $8 to $10.

FREE MARTINS BREEDERS.

Believing that many persons are not aware that a female will breed that is twin to a male, I am willing through the Agriculturist to certify, that two instances of the kind have occurred within two years, both within my immediate neighborhood. In the first instance, I had no difficulty in ascertaining that the female was the larger of the two when first calved; the last I did not see for some time after they were calved, and the owner did not seem to recollect that there was any difference in the size of them. I am strongly inclined to believe that in both instances the males were somewhat inferior to the females in size when first brought forth. I have known quite a number of instances in which the females would not breed; but whether they, or the males to which they were twins, were the largest, I know not. Should it be a fact that when the female is the larger of the two, they are just as likely to breed as single calves, I think it would be worth knowing. One of my neighbors quite lately informed me that he had a pair, but supposing the female would not breed she was slaughtered, when it was found that she was in calf.

Joseph Cope.

Kirkleavington, Pa., 20th of 1st mo., 1844.

TOPPING COTTON.

The December No. of your ever-welcome paper came to hand this day, and among its useful articles, my attention is drawn to that from C. McD., of South Carolina. I must first thank him for the kind manner in which he has alluded to my articles on the culture of cotton, as published in your work, and acknowledge to all whom it may concern, that I do indeed feel happy in having done some good; of having somewhat returned benefits for the very many I have received from farmers and farming papers. The amount of knowledge I have gained by personal experience is too limited to benefit any one; I am therefore indebted to books, papers, and men, for all I am able to retail second hand. Mr. McD. refers to the topping of cotton, and says he does not recollect that I touched on the subject. I did not; not that I thought its advantage at all questionable, but partly oversight, and partly because it was so seldom resorted to, that I feared to be considered as recommending anything questionable, thereby injuring the utility I hoped to accomplish in the articles written for your paper.

In the summer of 1832, I think, Mr. John Thomas, of South Carolina, visited me, and among other practical lessons, he urged on me the utility of topping cotton—declaring that it would well repay for the time, whether it were cotton that would yield only 500 lbs. of seed cotton, or of that which yielded 2,000 lbs. To make his declaration as strong to others as to myself, I here state, that this gentleman at the date mentioned had some 200 hands, was a cotton-grower, and had cultivated it for some 20 to 30 years; on the rich lands of the Congaree, as well as higher up the country on Broad river; he was an intelligent man, and truly a warm-hearted southerner—he is now no more.

In consequence of his urging me to try it on a small scale, as this country was new to both of us, I did so, and have had cause to follow it up ever since—sometimes neglecting at the proper time, from pressing occupations, or the season. I kept no memorandum of the difference, though I commenced farming, by keeping notes; but I am confident if followed up, that it will be beneficial two out of three years; and on most lands, will not injure the third year. I give my reason why it may not benefit every year. If the season is wet after the time of topping, say from the 25th of July to the 5th or 10th of August, there will shoot up water sprouts, which will shade the under bowls so as to prevent them opening well; it will make a heavy top crop of bowls, which will cause the stalk to bend down, and if any wind comes with the rain, the stalk can not regain its upright position. If the season has been very dry, the cotton will pretty much cease growing by the time of topping, and will not then be advantageous, unless done earlier—which, if I ever have another chance, I will try.

Topping is advantageous for the following reasons: the forms or squares, and small bowls, will not be cast off so readily, the upper bowls will mature sooner, make less leaf to be falling on the cotton, and the top bowls, principally, will be larger than otherwise. Last year I topped cotton on the first day of August—this year I did not top at all, owing to the wet season. I would not top cotton during a wet year, till I had more knowledge on the subject, for fear of the water shoots, but would not hesitate if a dry one.

Benefit of Manure for Cotton.—I have not seen marl used, but I can satisfy any one who doubts the effect of manures for cotton, and of cotton-seed especially—that no man ought ever to think of leaving a level farm, the house and friends of his childhood to seek rich lands. This year has been more favorable for thin lands, than usual; but whether for stiff clays is rather doubtful; and whether my manured land did better on this account, I know not—but here is the result. My orchard lot contains 24 acres, in which are ½ an acre in grass, ¼ in a flower garden, and near ¾ in roads and gin-house; I therefore say there are 23 acres in cotton, 9 of which were manured with cotton-seed. and about one with barnyard manure. From the 23 acres I have gathered an average of 1,138 lbs. per acre. The poorest land on the place, and the poorest portion was manured; a part of the unmanured, say 4 or 5 acres, could not have averaged over 700 lbs. per acre. This field has been in continued cultivation since 1828; has on it some 270 peach-trees, 3 years old; 50 small pear, apple, and cherry, with some 30 large peach-trees; besides, two rows of morus multicaulus, forming an avenue to the house. If the trees were deducted, there would not be over 21 acres, which would give me 1,150 lbs. on an average; with enough more, if gathered, to make 1,300 lbs. Another field that is high and dry, gently undulating, cleared in 1833 or '34, and is much richer land, will not give me that average, and was at no period of its growth as good, as was the manured portion.

Pleasures and Advantages of Remaining at Home.—Let any man "cypher" up the cost of moving—the cost of land—the cost of building—the cost of clearing—to say nothing of the deprivations in a country where farms are to open—the loss of dear associates—our school-mates—and the time required to prepare for making money, and I venture on it, no sane man will move. I want to see many from those old countries here: not that, Indian-like, I wish them to suffer because I have, but that I want a thicker-settled country, and more demand for land. Yet with all this I would recommend them to improve at home where they now are; husband their resources; study the economy of manures, improved agricultural implements, stock, seeds, and the best rotation and management of crops.

Would that man merit aught but opprobrium, who would urge his fellows to sever every tender tie that binds him to "Home, sweet home;" to even the "old oaken bucket;" to the soil; to his associates and relatives, for the purpose of getting richer land, which, when cleared, and cultivated as is now done, will cause the young flock to wander again—and in reality, only serve to support one generation? I say nay, and therefore urge it on our brother farmer C. McD., as on all others in that good old state, to make it a part of their regular business to save, gather, and make manure; they will find that three years of labor, with the cost and loss of moving, will give them such lands, that they will cling to the "old south state," even if they live in the "Peedee country—God bless you."

Leibig's Letters.—I have just finished reading Leibig's Familiar Letters, and a capital fine thing it is. I wish it had been published prior to his other works, as I think it would have been more generally beneficial; whereas, many who purchased the first works of his, have not read them through, and will suppose this to be a similar work. But the form of letters makes it indeed "familiar," and it treats on "familiar" subjects.

M. W. Philips.

Log Hall, Miss., December 21st, 1843.

In reply to inquiries, Dr. Philips' address is Edwards' Depot. If equally agreeable to our correspondents, we would recommend in communications made us, always dating from their Post Offices, when not that of their residence. They can then be written to by any one who wishes without further inquiry, and with a certainty of the letter reaching its place of destination.

JOTTINGS IN ENGLAND.

We here give the first of a series of articles that are promised us by a friend now travelling in England, and although written with all the ease of a familiar letter, our readers will find them to abound in valuable observations on the agriculture of Great Britain, the writer being one of our own most eminent agriculturist. We expect his tour will be extended to the Continent, and if so, we shall hope for a continuation of his observations there. European continental agriculture is almost unknown to Americans, and yet many valuable things are to be found there, well worthy the attention of our countrymen.

London, January 3d, 1844.

English Horses.—Among other things, I have been looking round me with some reference to the relative excellence of the English and American horse, as alluded to in an editorial article which I remember to have seen in the American Agriculturist; and though I then doubted the correctness of your opinion, yet I now think, on the whole, that a certain class of horses here, answering to our horse of all work, is an inferior animal. I must, however, think that the strong English hunter, the great weight carrier, the noble animal that is master of sixteen stone, [224 lbs.,] across a heavy country, is of all others *the very horse* for our purpose; for in him are united size, power, activity, and courage, with all the *clean* and valuable points of a well-bred horse. At the cover-side. you may see gathered together, for the day's sport, some fifty or sixty such; but in my own country, some few occasionally cross my path, but nowhere, and on no occasion, is it the general character of our horses.

When I consider the small difference in expense between raising good and bad animals, and the vast difference in their value when fit for market, I am only astonished at the short-sightedness of our farmers, and their "penny-wise and pound-foolish" principles of using a cheap stallion, by which they often save Ten Dollars, and as often lose Fifty. Good breeding must be based on good blood. The carriage-horses now in "town" are very ordinary, and are by no means as closely matched as they are required to be in the city of New York. But I am told that "London is *empty*," and consequently the best horses are in the country; and I doubt not that in "the season," London contains more fine horses than any city in the world—*nous verrons*—(we shall see.)

Unsound Feet.—Of one thing I am well convinced, that there is very much more unsoundness of feet here than with us in America, which I am inclined to attribute to a large portion of our winter's work being on snow, which keeps the feet cool and moist, and saves them from the constant jar of a hard, unyielding road; while our comparatively cold open stables render them much less liable to inflammatory disease, affections of the eyes, and a thousand other ills attendant on thick clothing, and close, warm stables in a climate where the thermometer has not as yet ranged below 29 degrees.

Clipping Horses.—And now let me notice for the consideration of such of your readers as are interested in horses, the practice here called "*clipping*," which is in England attended with the best results in every point of view, especially with horses that have long, thick coats, and are with difficulty dried off after their work. The operation consists in clipping over the whole of the horse's coat from his head to his heel, with curved and other shaped scissors made for the purpose, raising at every clip the hair with a very flexible and rather fine-toothed comb, in order to its close cutting without notch or rib. The expense of clipping a full-sized horse is two guineas, or about nine dollars and a half, and is generally performed by three men, who commence at six o'clock in the morning of one day, working all that day through the night, and finishing about noon of the next day; their object in thus uninterceptedly continuing the work, is that they may take advantage of the animal's drowsiness to clip the more troublesome parts about the belly and flank, which in a ticklish horse might otherwise be difficult. One would naturally suppose that such an operation could not but be dangerous to the health of the animal, and that colds, coughs, &c., must ensue, but I was surprised to find that this was by no means the case, and that an extra blanket for a week or ten days, with a little more care while standing in harness, was all that was requisite to ensure the safety of the horse. After that he is even less liable to cold than before the clipping, from the fact of his seldom sweating, and when he does do so, that he dries quickly, instead of standing for hours in a long wet coat of hair. It also in many cases makes a perceptible improvement in the cheerfulness, and consequently in the action and work of the horse—gives him a most beautiful, velvet-like, close coat—and much facilitates the groom's work of cleaning, &c., &c.; indeed, so generally is the advantage of clipping acknowledged, that even the mail and stage-horses have this expense bestowed upon them; and not unfrequently a cab-horse is seen half clipped, that he may be the easier cleaned from the filth of London mud. Shaving has been resorted to for the same purpose, but is not so well liked. Singing has been practised, and a very clever little instrument was invented for applying the flame; but of all the modes, clipping has the preference, though you find the singer in almost every stable for the ordinary purpose of trimming horses, and is, I presume, now to be purchased in New York; if not, I would recommend attention to it.

INDIA-RUBBER BOOT.—Being now fairly in the stable, let me mention the patent India-rubber boot, as the very best and neatest protection I ever saw for an interfering horse. It remains in its place, fits close and snug to the ankle rounding in with the fetlock joint to the pasture. As far as my experience goes, after two or three years' use of them, it causes as little, or less chafe, than any others; and when worn on a black leg, draws very little attention to the infirmity of your horse—which, by-the-by, is a very hateful one. What is more absurd than a horse going on three legs, and carrying the fourth, because he can not keep it out of his way?

CULTURE OF CRANBERRIES.

HAVING been frequently addressed by gentlemen in your state upon the subject of cultivating the cranberry, I beg leave through your paper to answer them, by replying to the following queries of one of my correspondents just received.

1. Are the plants obtained from the berry? It is my opinion they are not, as I have repeatedly tried the experiment of endeavoring to grow them from the seed, and have known others do the same, but without success.

2. Is manure necessary in the rows or hill? I should think it was not, for our greatest yield of cranberries in their wild state, is obtained from cold sour lands.

3. What time in the spring or fall should the roots be planted? I had always followed planting in the spring till the fall of 1842. The vines planted that fall yielded a few berries the succeeding autumn of 1843, but not so abundantly according to their time, as those planted in the spring. This, however, may be owing to the cold season we had; for the cranberry here, generally, was cut short last year.

4. The manner in which I commenced the culture of them, and success up to this date? In the spring of 1840, I planted half an acre with roots, put out in drills 18 inches apart, and 2 inches from each other in the drills. The following autumn, 1841, I gathered 12 quarts of fine cranberries. The next autumn I gathered 28 boxes, measuring one half bushel each box, of which 6 boxes were sent to the American Institute, and were awarded a diploma. The fall of 1842, I gathered 81 boxes from the half acre, and again was awarded a diploma by the American Institute for such as I showed. The past two years have been very bad seasons for the cranberry, the crop having fell short of its usual yield greatly; but not so much so as the common wild cranberry. I have set out plants every year since 1840, taking the most thriving which I could find, and have always had a good yield when the season was reasonably favorable.

Any one wishing to obtain roots will please address me, stating the number of square rods they wish planted, when I will give my prices for the same. SULLIVAN BATES.

Bellingham, Mass., Jan. 25th, 1844.

SCARCITY OF SWINE AND SHEEP.

SWINE of all sorts have been selling high lately, and there is great inquiry for them now. Many think as times improve, and the farmers' spirits rally a little, that Berkshires will be in active demand again at fair prices. I should like to see your opinion on the Chinese breed for this country, for making shoat pork for the city market. There is an immense quantity of that kind sent to New York from this county in the summer months, alive, and in the early autumn months, dead. It is of a superior quality, being fatted from the refuse of the dairy. The Chinese breed, if we could get them to produce fast enough, would do us good. They are small and slow of growth; but they are easily kept, and we could therefore feed more of them—the pork of this breed is most delicious.

There is more inquiry for sheep since the late advance in wool. It is supposed there is not one fourth the number of fine sheep in this county that there was eight years ago, and many will soon regret having so heedlessly destroyed this invaluable animal. S. W.

Orange County, Jan. 19th, 1844.

Instead of thorough-bred Chinese, we would recommend our correspondent to take a cross of them upon the Berkshires, as this produce would make just the thing for his purpose. We recently saw at Mr. Woolsey's, and also at Mr. Valk's, on Long Island, some beautiful specimens of the swine kind made in this way. We need not add the repeated experiments we made on our farm several years ago in thus crossing these breeds, as they must be still fresh in the memory of the readers of the agricultural journals. It is sufficient to say that they were highly satisfactory, and found favor with all who desired a medium-sized animal.

THE CURCULIO.

The Curculio, (*Rhynchænus Cerasi*, Peck,) its natural history, habits, character, and the best mode of preventing its destructive ravages; together with remarks on the cause of the disease known as the Warty Excrescence, and suggestions to prevent its appearance. In a letter to the Committee on Fruits of the Massachusetts Horticultural Society. By Dr. Joel Burnett, Southborough, Mass.

This insect was called by Herbst, *Rhynchænus Nenuphar:* by Peck, *Rhynchænus Cerasi*—but commonly goes by the name of *curculio*, or plum-weevil, by horticulturists. "He is a little rough, dark-brown beetle, has two small bunches or protuberances on his back, a rostrum or beak on which are two antennæ.

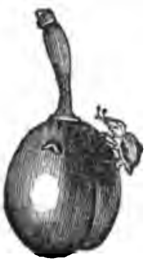
(Fig. 11.)

The Curculio of the natural size.

He is so shy and retiring and unobtrusive in his character, in his beetle-stage, that he is not liable to be seen unless he is searched-for purposely, and this is the reason why so little is known of him generally.

When you have discovered that he is operating upon the fruit, which you may know by his peculiar mark upon it, by assiduously watching, you may chance to see him cutting the incision with his rostrum, (*fig.* 12.) If you extend your thumb and finger toward him, it must be done very cautiously and slily, or before you touch him he will drop, as imperceptibly as a small shot would, to the ground.

(Fig. 12.)



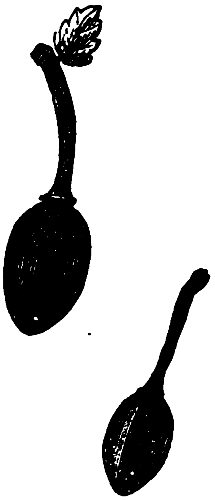
The Curculio in the act of making the semi-lunar incision with his rostrum, or beak.

It should be remarked, that we do not know that he uses the fruit for his food, but chooses it as receptacles for his eggs.

He begins his work upon the plum and apricot, as soon in the season as the small cap or covering, formed by the blossom, falls off, but not so soon upon the peach. Examining the fruit occasionally or daily, you are to know when he has commenced his work *by his peculiar mark* or incision, which is readily seen on fruit with smooth skin, as the plum, cherry, apple, &c., but on the peach it is known by a small drop of gum oozing from its surface. It has been stated that the furzy surface on the peach, is a barrier or obstacle in his way, but it does not prove so here, as the injury which it sustains is quite general, unless protected.

I say, then, he is known to be on the fruit-tree by his peculiar mark on the fruit. This mark is the wound he makes with his rostrum, which consists in raising up the skin of the plum to a small extent, under which he deposites an egg. The shape or form of this mark is semi-lunar or crescent-shape, and in the middle of this wound is a small discolored speck, where the egg is placed, (*figs.* 13, 14, 15.)

(Fig. 13.)



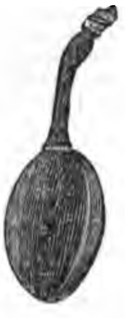
Incision near the apex in small plums.

In the early part of the season, or during the month of June, his mark will be found near the apex, or point of the plum (*fig.* 13.)

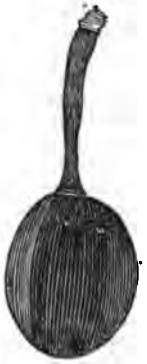
But after the plum has reached a considerable size, or from the 1st to the 20th of July, his mark will be found at the base, or near where the stem is inserted, (*fig.* 14.)

This last-mentioned place the insect prefers, it would seem, from instinct, lest the plum, by its strong connexion to the tree, should not fall soon enough to secure the welfare of the grub within it; for this vital connexion is sooner disturbed by the worm than it would be if the egg had been deposited at the apex.

(Fig. 15.)



(Fig. 14.)



(Fig. 15.)

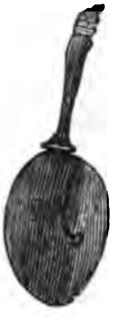


Fig. 14 shows the incision near the base, in large plums. The small or discolored spot, at the inner line of the mark, is the nest where the egg lies.
Fig. 15 shows the blue line, which indicates that the grub is eating within.

When the egg hatches, the larva sometimes, it is presumed, falls from the nidus or nest, and the fruit remains unharmed; but most generally, in four or five days from the time the egg is laid, a small bluish line, near the skin, may be seen extending from his mark, (*fig.* 15,) which signifies that the grub is within. And also when his mark has assumed a bluish tint, you may be certain that destruction will follow; for when you see these signs, take the plum from the tree, and cut off a small portion where the mark is, and you will notice that the larva has burrowed down into it.

The effect, upon the plum or other fruit, of the larva within, is to cause it to shrivel and decay, and after a while it falls. By the time the plum falls, the insect has nearly or quite completed his larva or grub stage, and then he leaves it and goes down a little way into the earth.

Here in the earth he undergoes his transformation, (*fig.* 16,) which is performed in about fifteen or twenty days, in the month of June, or fore part of July. But all the larvæ (so far as I have observed) that go into the earth about as late as the 20th of July, do not ascend that season, but remain there in the pupa stage, (*fig.* 17,) until the next spring. We are to observe, then, that there are two generations in one season, of these insects, and this fact it is important to know; for if the first generation in the larva and beetle stages is destroyed, we have little to fear from the second, which operates in July.

(FIG. 16.)

Larvæ of the Curculio of the natural size.

(FIG. 17.)

Curculio in the pupa stage magnified.

The kinds of fruit, and the only kinds, which the curculio injures, as far as I have observed, are the plum, apricot, nectarine, peach, cherry, and apple, and these I have placed in the order in which he seems to prefer them. But I would remark, that he is not the only insect which makes the apple wormy. The codling-moth does great injury to the apple-crop, and the caterpillar of this moth should not be mistaken for the larva of the curculio.

The curculio does not usually injure the cherry-crop excessively, but it is remarkable what a cause of general devastation he proves to the plum-crop, when he is suffered to go on in his work unmolested. The writer has known large plum-trees, loaded with fruit, in the early part of June, upon which nearly every plum would be punctured, and consequently all would be lost to the cultivator.

The objection, in the community, against cultivating this fruit, is upon the complaint, or fact, that the plums will not hang on until ripe; and nurserymen are often questioned, if they know of any kinds that will not drop before they become matured.

As great a pest as this little insect is to the fruit-grower, I am not willing that he should be loaded with more sins than he deserves. He has been charged with being the cause of the fungus excrescences on the plum-tree, of which he will not plead guilty. True, his larva, and also those of some other insects, it is said, are found in this fungus, and this is the reason why this disease has been attributed to him. My reasons for saying he is not the cause of this disease, may be offered in another place.

It is remarkable how unconfined or unlocated the curculio appears to be. I formerly believed that he was limited nearly to the ground, under and near the tree where he was produced, and that, if the earth under it was paved, or so fixed as to prevent the larvæ from descending into it, that tree would be secure the following season, at least. But more extensive observation has taught me otherwise. This fact I consider a very important point in this insect's character. In 1838, a new apple-tree came into bearing, having three apples upon it, situated 20 rods distant from any fruit-bearing tree, and I hoped to test the quality of the apples thereby; but I was disappointed. In the first of July, I noticed the spoiler's mark upon these apples, and after a while they dropped off. I have searched after, and found him, upon an apple-tree in a pasture, which stood alone and at a distance from any other fruit-tree. A plum-tree, trained to the east end of my house, bore for the first time in the year 1841. I watched the fruit, and, about the usual time, found his mark upon some of the plums, and secured them. From these observations, I am led to the supposition, at least, that he may not be dependant altogether upon the before-mentioned fruits for the propagation of his race; but when fruits are wanting, he finds other receptacles for his eggs. But this is a conjecture simply. No doubt he is capable of flying to a considerable distance.

Dr. Harris stated to me, that he was not certain that the plum weevil does feed in the beetle form, though he rather supposed he did. But whether he does or does not feed, his organs of taste and smell are rather obsolete or disused, for we are able to state, from observation, that many kinds of odorous bodies which are obnoxious to many insects, are not so to him.

I have tried camphor upon the tree, watered it with solution of soap and of tobacco, and I do not know that he was disturbed any further than he would be mechanically by their application.

I might here notice the inadequacy of other measures which have been recommended to frustrate his operations, but prefer to proceed to a statement of those means which will ensure success, if persevered in, and prove satisfactory.

As the notion is prevalent that he crawls up the body of the tree, I would state that he flies on to it, and, therefore, it is useless to apply any preventive to keep him from ascending that way.

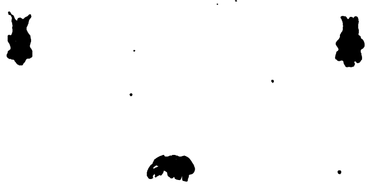
I am free to state, that this insect can not be combated without labor, and the result secured, will very far more than compensate for all labor bestowed, even in a pecuniary point of view.

Believing, from my observation, that he can not be successfully opposed by preparations of soap, and infusions of odorous bodies thrown on to the tree, by means of a syringe, I proceed to state the course which has been followed with success, so far as I know.

Our rule of action should be, *direct aggression* upon him, both in the beetle and larva forms. In the pupa stage he lies in the ground secured from our search.

Watched, as the plum and fruit-trees always should be, by the gardener, as soon as his mark is seen on the plums, which will be generally as soon as the plum is left naked by the blossom, a sheet of sufficient dimensions should be suspended beneath the tree, by two or three individuals, or otherwise; then give the tree a sudden rap, or jar, and the insect immediately falls upon it, and, feigning himself dead, very much resembles a raisin seed in form, (*fig.* 18.)

(Fig. 18.)



The insect, when shook from the tree, assumes the above form, either that of the upper or lower figure, and keeps the feigned appearance a moment or two.

All the curculios on the sheet should be crushed between the thumb and finger, and all the stung plums that fall from the tree should be put into the fire.

I would impress upon the mind of the gardener the importance of assiduously attending upon his destruction in the month of June. The trees should be shaken twice or three times daily, certainly in the morning and evening, in order that the beetles may be crushed, and all the wounded fruit gathered and put into the fire. I have observed that usually after the twenty-fifth of July he is not to be found.

If the first generation, which operates in June, are well destroyed, we have less, yea, very little, to fear from the second generation, which work in July. Children, who are always urged, by impulsive curiosity, to examine and investigate any new and curious object—of an insect, flower, or pebble, are ready and sufficient hands to perform much of this work, and gladly will they perform it when promised a share of the product.

This mode of protecting and preserving plums from the curculio, I have always found to succeed.

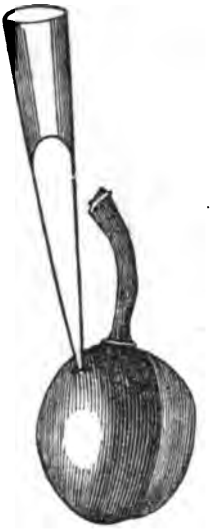
I am aware, that the labor required may be thought an objection to this mode of warfare, and that the result will not warrant the time and pains; but if the orchardist will tar his apple-trees to protect against the canker-worm, and the gardener spend time to kill the cut-worm, and water his plants in a dry season, surely this course is also justifiable: the result will justify the means.

A tree standing near the door, if jarred and shook several times a day, as it may be passed, would be likely to succeed, as this course would discommode and frustrate the insect in his work.

Plum-trees, standing in a hog-yard, frequently sustain partial crops, for the hogs are frequently, during the day, rubbing against them, and are pretty sure to eat all those that fall to the earth.

Plums can be saved, even after the egg is laid in them, by a trivial operation, if done before it has hatched; and this operation I have practised successfully and repeatedly.

(Fig. 19.)



Showing the method of destroying the eggs with a quill.

You may smile at a manœuvre, which is to destroy an almost infinitesimal egg, with an instrument made of a quill, like a tooth-pick; but this the fruit-amateur will do with pleasure, if thereby he can save a plum on a new young tree, to test the fruit of which he has been waiting patiently with hopeful anxiety. It is well worth the while to do this on low trees, in point of economy.

It may be well to remark, that the egg is deposited in the inner circle of the incision, under a small discolored portion of the skin of the plum, and the operation consists in removing this discolored portion of the skin, and scooping out the egg with the instrument, (*fig.* 19.)

The desire which has been manifested in the community to possess a knowledge of this insect, the manner in which he operates, and a means of destroying him, must be my apology for thus far prolonging these remarks.

Warty or Black Excrescence.—A communication from William Prince & Co., some few weeks since, to the Editor of the New England Farmer, in which a list of the kinds of plum is made out, which, they say, are not subject to the fungus or warty excrescences, has induced me to state my opinion concerning the nature of that disease.

I do not remember to have seen that disease spoken of except in connexion with the belief that it is caused by an insect; and I believed it to be so produced, until observation proved to me that it was attributed to the wrong cause. The reason any one would offer as proof that the disease was caused by the curculio, is that its larvæ are sometimes found in this juicy fungus.

There is one analogous reason for attributing this fungus to the curculio, or some insect; that is, the production of galls upon the oak by the puncture of an insect, and the depositing his egg in the puncture. But how uniform, in form and size, are these galls, compared with these excrescences, which are very irregular in form and size.

So far as I have been able to observe, by dissecting these fungi, they appear to arise in that part or texture called the alburnum.

I have thought that the proximate cause might be an obstruction in the vessels of that texture, by reason of the unhealthiness of the sap. The vessels burst, and the sap is poured out under the bark. Now the sap is as full of the life of the tree as blood is full of the life of an animal.

This extravasated sap will immediately become organized, or partially so, and, rapidly increasing, burst through the outer bark and make its appearance.

This fungus is not confined to the young wood, but is produced upon limbs of large size, the outer bark of which the curculio would not be able to puncture.

It makes its appearance from June up to August. These fungi come in all forms; sometimes in a single spot, and then again extend along the limb for several inches, always with an irregular granulated surface. This want of uniformity in form, size, and location, is evidence that it is not caused by an insect. After being cut from the large limbs, these fungi will often sprout out again between the wood and the bark where the wound is made, and require a second operation.

Now, this would not be the case if caused by an insect. This disease may often be noticed under the bark before it burst, upon large limbs, where the bark is strong, which, if slightly opened with a knife, will yield to the pressure, and the fungus soon appears.

While this fungus is young and tender, the curculio finds it a convenient receptacle for his eggs, the juice of which affords abundant nutriment for the larvæ. A pretty sure sign, by which you may know that he has used it for that purpose, is a small drop of gum oozing from its surface; and where you do not see this sign, you may not expect to find his larva within.

I have said that this disease begins in the part called the alburnum. This is the texture through which the sap ascends; but it soon involves every texture of the tree, wood and bark, and is malignant and surely fatal to the limb on which it grows. It is as destructive to the tree as cancer is to the human flesh. These fungi always die the succeeding winter, never live over winter, and remain upon the tree, unless removed, a black, unsightly mass.

I have observed two trees, both of a kind, and nearly of a size, but standing apart and differently located; one would be diseased with the excrescences, and the other would not, while the fruit of both would be nearly alike injured by the curculio; and this fact I consider additional evidence that he is not the cause.

It is desirable both to find a remedy when a tree is diseased, and also a means of prevention. The only remedy I know of, is to cut the tumor out, and this should be done as early as possible. If done early, and with care, the wound soon heals, and the limb is but slightly injured.

But a means of prevention is more desirable than a remedy.

A tree of most of the kinds of plums which may be obtained at nurseries, if placed on a somewhat gravelly soil, whose power to retain water is small, and, therefore, subject to sudden transition from a moist to a dry condition of its roots, every season, I will venture to say will be diseased.

I do not mean that there may not be an exception, and that all kinds are equally subject to it; but I know of no exception, among a number of varieties, which have been cultivated under my observation.

I am inclined to the opinion, that a prevention may be found in cultivating the plum in a loamy soil, rather moist, and in keeping that soil uniform as to moisture and richness.

Any kind of tree is not in the condition in which nature would place it and keep it, when the soil over its roots is kept naked and exposed to the burning and drying suns of summer, or uncovered and unprotected from sudden and intense cold of winter.

Neither can fruit-trees prosper so well in grass land; for, though the covering of grass may serve as protection from extreme heat or cold, yet it will take from the soil the nourishment which should go to the tree.

In what a uniform condition the roots of forest-trees are kept, by the thick bed of leaves which covers the earth, the slow and steady decomposition of which affords the necessary nourishment; and so matted and plaited are they, as to prevent the escape of the fertilizing gases, which must otherwise evaporate unappropriated by the trees.

So far as I have observed, those plum-trees have been exempted from these fungi which are located in good soil not subject to drought or deficient in moisture. Trees standing beside a heavy wall prosper better, (other things being equal;) than those which stand in the open field, on account of the protection which the wall proves to the roots.

Entertaining these views, I would recommend to fruit-growers the following mode of cultivation, as a prevention:—

Let the plum-trees be set in a soil rather loamy and moist, and they may be set within 8 or 10 feet of each other. The soil should be in good condition as to richness, and being made smooth and level, should be covered over with a good coating of straw, old hay, or leaves. This covering is to lie year after year, and decompose as the leaves do in the forest, having addition made to it from year to year, as may be necessary.

Such a course of management will make the soil approximate to uniformity as to temperature, richness, and moisture, and, I believe, insure success in cultivating the plum; and not only is it suitable to the plum, but will enhance success in the cultivation of other kinds.

The above article is copied from Hovey's Magazine of Horticulture, and we are indebted to its obliging editor for the use of the cuts which illustrate it.

SUPERIOR DUTCH CHEESE.

Take sour loppered milk, skim off the cream, then set it over the fire in an *iron pot*—brass is poisonous. Let it remain until the curd rises, which will be when the whey is scalding hot at the bottom of the pot; there is a difference in the heat of the whey at top and bottom. Skim the curd into a basket, which is best; let it remain six or eight hours to drain, then break the curd, (on a table,) as fine as possible; after which put the curd lightly in a stone jar, salting it to taste. Let it remain in the jar, stirring it twice a day with a wooden spoon or round stick, keep it loose and light, until it becomes palatable to the taste of the maker. The cheese acquires a disagreeable flavor if kept too long in the jar. Make the cheeses into small balls, and set them in a cellar. It should not be eaten the first few days, and is best flavored from one week to two weeks old.

An Orange County Lady.

FARM-HORSES.

The following article was sent us in May last, but having been mislaid, its publication has from this cause been deferred to the present time.

There is no one item of farm management in the United States, which has received so little systematic attention, as that of raising a breed of horses suited to the varied purposes of a farm. In every other class of stock, we possess to a greater or less extent, original and distinct breeds, long tried and highly approved, for the different purposes for which they are required. Thus, we have the improved Durham cattle for early maturity and profitable milking and fattening qualities; the Herefords, for the yoke and early economical fattening; the Devons for richness of milk, superadded to the qualities of the Herefords; and the Ayrshires, a more recent breed, adapted to the dairy and the shambles. In sheep, we have the silken-fleeced Saxon; the fine, heavy-fleeced Merino, through all the different, yet distinct varieties of Escurial, Paular, Nigretti, &c.; the long coarse fleece and heavy carcass of the Cotswold, Lincolnshire, and Bakewell; and the medium wool, and choice carcass of the South and Hampshire Downs, and Cheviots. Swine run through the various grades of distinctive excellence, the Berkshire, China, Mackay, Woburn, Byfield, Kenilworth, Neapolitan, Essex, &c.; while all the lower tribes of geese, ducks, chickens, rabbits, dogs, cats, pigeons, etc., have their pedigrees as pure and unstained as the most legitimate possessors of an hereditary title.

The horse too, in one branch of his family, enjoys a distinct and honorable lineage, as carefully guarded against all lapse or blemish, as the claimant for royal succession. Sometimes, it is true, there is a blot in their escutcheon, which, owing to great excellence on the part of the individual, the world slurs over, as the loyal subjects of Great Britain have occasionally done, in the instance of their Seventh Henry, and some others; while they dwell on the strong crosses from other branches of the family with peculiar emphasis and complacency. American Eclipse, and his peerless daughter, Black Maria, have been more than forgiven, for the trifling hiatus in their pedigree, in consideration of the unequalled progeny of the former, and the hitherto unsurpassed performance of his three successive four-mile heats, and the yet unattempted imitation of the five four mile heats of Black Maria. If we except the large, mongrel, Pennsylvania cart or wagon-horse, which possesses the greatest claims to a definite race, *a breed, a distinct, peculiar breed of horses, the best fitted for the general purposes of a farm, the horse of all work, is not known in America.* We have in certain sections of the country, a full supply of valuable horses, from which may be selected a large proportion of individuals well adapted to a variety of purposes, and perhaps to *all* the wants of the community; but they are of every form and feature, and can be matched, only occasionally, in all requisite points.

It is vastly to be regretted, that such enormous sums have been expended for the importation of racing-stock, while so little has been accomplished for the production of the more humble and more serviceable beast. Millions have been paid at the south and west, for turf nags; yet how small the proportion of really useful animals do they possess at the present moment. In most instances, their importations were made without reference to the improvement of the farm-horse, or without judgment, if they were; and the breeding has been without system or design. Fancy, not utility, has been the motive, and fanciful enough has been the result. There are thousands of horses, for which, for the single item of begetting, their owners have paid from $50 to $100, and which have cost them as much more, at least, to rear, and yet a purchaser would make an indifferent bargain in paying for them the cost of their conception. Many choice animals, it is true, are owned there, which however, are principally suited to the saddle, and not to the harness, which is the great requisite in the farm-horse. As those are the sections of the Union distinguished, *par eminence*, for the race-course, it is a very legitimate conclusion, that the turf is not always the parent of improvement in horse-flesh. Is it essential to this improvement? Let us see.

In the six north-eastern, or New England states, horse-racing has either not been practised at all, or tolerated in former times, occasionally, by some of them, only to a very limited extent. Massachusetts and Connecticut have never permitted them, and *the fancy* who were to attempt such a test of horse-excellence in either state, would be treated to an apartment in their jails, or a seat in their stocks; the latter state, placing the champions of the turf, in the same category with the votaries of Thespis or Terpsichore, play-actors, dancers, circus-riders, mountebanks, and the whole race of Harlequins and Judys. Yet what has been the result of horse-breeding in these states? Briefly, it may be replied, that with comparatively no extra expense for costly importations, they have, till within a few years past, produced a more valuable, serviceable race of horses, than could have been shown from an equal territory, in any other portion of the country. The Yankees, true to the instinct that sent them 3,000 miles into the wilderness, from the most civilized nation in the world, enjoying all the blessings of an hereditary royalty and aristocracy, a state church, and numerous other privileged classes, broke loose from many of the dogmas of the day, and from none more effectually, than the long-established one, that successful racing was the only true and proper test of excellence in a horse. They bred exclusively from the manifest, tried, and acknowledged merits of an animal, and with some, yet it must be confessed, with too little reference, to the merits of ancestry in the one selected for breed. Had the latter principle had that full and ample consideration to which experience has shown it entitled, it is believed their success in stock-breeding, would have been inferior to no other portion of the world. As it is, however, it must be acknowledged a fault, and though not a vital, yet a great one, in the practice of which, no distinguished or general excellence can ever be reached. We have seen, in late years, how they have been surpassed by the southern portion of New York, and especially Long Island, and New Jersey, in the greater number of superior roadsters, the natural result of a continued and thorough system of breeding choice mares, to the best formed, and most substantial, imported blood-stallions.

New England has, in former times, possessed some horses of unmatched qualities, which they have derived from various sources. Several importations have been made from the great source of all modern improvement, the sandy region of the east, and which, though at small cost, and sometimes accidental, yet they have been creditable to their subsequent possessors, from their proper use, and the just estimation in which they have been held. Among many so distinguished, pre-eminently stood, *longo intervallo*, the far-famed Morgan horse* of Vermont, and his more ancient compeer, the imported Barb Ranger, or as he was subsequently called, Lindsey's Arabian.† There is a tradition on our northeastern coast, that a valuable Arabian stallion was, in the early settlement of that country, washed ashore from a stranded vessel, and running wild with an excellent breed of native mares, then ranging the woods, he founded the stock of Narraganset pacers. These were, at one time, quite a distinct breed, valuable for their speed and endurance under the saddle, though they can hardly be said to have been a desirable race as a farm-horse. They produced a good deal of profit to their breeders, by shipping to the West Indies, for which market these animals were precisely adapted, the bloods of those islands esteeming the high spirit, and rapid, easy gait, as the very perfection of horse-qualification; and when once mounted on these mettlesome pads, by the aid of three negroes, one at the bit, and one at each stirrup, they probably felt as Richard the third, when he bid,

> "My kingdom for a horse."

We once had a humorous description of a scrub-race near Chepachet, or somewhere in the region, of a more recent and famous race of bipeds, in which one of these pacers was pitted against a crack-racer, and finding he was losing ground in his running-gait, adroitly fell into his accustomed pace, and fairly distanced his opponent.

The importation by Gen. Eaton in 1806, of two choice Barbs, on his return from Tripoli, (where he rendered such distinguished services to his country, out of all credit for which he was most effectually *jockied* by our then administration,) produced no marked improvement in the horses of Massachusetts, where they remained for many years.

The history of that remarkable animal, the Arabian Ranger, (unsurpassed it is believed, by either the Darley Arabian, or Godolphin Barb,) as given in the Turf Register by Gen. Forman, is substantially the same as was related to me, by that eminent importer and breeder, and accurate judge of all varieties of stock, from the mettled-courser, and thorough-bred Durham, through all its gradations, to the graceful and choice varieties of the feathered tenants of the farm-yard, Charles Henry Wall, Esq.; whose birth-place, Pomfret, in Conn., was for a long time the home of this horse.

He was white, something over 15 hands high, of perfect form and symmetry, and was presented by the Emperor of Morocco, from the choice of his stud, to the commander of an English frigate, for some distinguished service. Before returning to his own country, he put into port, either in the West Indies, or one of our southern states, and while the ship was detained, the horse was sent on shore for exercise, and placed in a lumber-yard. His playfulness induced him to climb on a high pile of boards, from which he was precipitated, and before extricating him, he had, broken *three* of his legs. In this condition, he was presented to the captain of a New England vessel, who, aware of his great value, made every effort for his recovery, in which he was entirely successful, and brought him to New London, in Conn., whence he was taken to Pomfret. This was just previous to our Revolution.

Early during our struggles, in the formation of our infant cavalry, the attention of that invaluable officer, Capt. Lee, was called to a class of remarkably fine horses, the progeny of this animal, and from them, he furnished his troop, which, for a combination of all the requisite qualities of such a body, from the leader to the private, both men and horses, have no superiors. For sudden, terrific, and successful attack; for courageous, indomitable and bloody defence; or if borne down by hosts of opponents, for prompt and unassailable retreat; this band of heroic horsemen have in no age of the world ever been surpassed. The favorite white horse of Washington, which Stuart has immortalized in his splendid picture, in which the animal is seen supporting the arm of his beloved master, as he stands with a countenance teeming with inexpressible emotions, watching from the Battery, the embarkation and retreat of the last of his country's invaders, is said to have been got by the Arabian Ranger. If there be any authentic history to correct or confirm this statement, we hope to see it forthcoming, ere the survivors of those glorious scenes have passed from the earth.

But such progeny could not have been ennobled exclusively, by such a sire. Æneas was promised a royal race, only from Latium's imperial line; and it may be inferred conclusively, that the elements so happily blended in these coursers' veins, drew no inconsiderable portion of them from the merits of their dams. This noble beast, after having raised his reputation *without the aid of the course*, was, subsequently to the Revolution, sold as a special favor and at a high price, to Captain Lindsey, and taken to Virginia, where he became the sire of several distinguished running horses, and among others, Tulip. Many of the best horses of the present day, rank him in the line of their progenitors.

---

* Supposed to have been a cross between a choice Norman and English thorough-bred.

† I object to the application of "*Lindsey*" to this animal, as Capt. L. was no further instrumental in extending his reputation or character, except as conjointly with other individuals, he aided in procuring his transfer from Massachusetts to Virginia.

Here, then, we have two distinguished instruments in improvement, without the remotest indebtedness to the turf, and the improvement may be sustained and perpetuated to the latest generations without recourse to it, if necessary. But though we do not consider such a test any more essential to the selection of a horse for all the purposes of utility, than we do the stage, as a necessary adjunct

"T' improve the manners and to mend the heart;"

and though many winners of high estimation would be utterly worthless as breeders for any useful object, such as Col. Johnson's little Trifle, christened, No Trifle, after beating Black Maria when somewhat out of condition from her performance at Baltimore, when she took the prize of the Jockey Club some dozen years ago, but subsequently broken down in her 20-mile race with the same competitor; besides many others that it is needless to name; yet we would by no means exclude such as commended themselves to a favorable notice from their other good points, in addition to success on the course. There is too generally, however, where all qualities of form, and substance, and endurance, are satisfactory, an inherent viciousness of temper, a restiffness under restraint, or an untameableness of spirit that renders animals too nearly allied to the thorough-bred, unsafe or uncomfortable companions for ordinary use. In emergencies, and when great exertion is demanded, they are just the thing required; but they are not the farmer's horse, and it generally needs some removes from the thorough-bred to bring them within that class.

Good roadsters can be secured from many of the high-bred, or nearly pure animals, which may now be found in considerable abundance in many parts of the Union; for it is the recent observation of an experienced judge, that 30 or 40 years ago, it was the most difficult thing to procure a good horse in the Middle States, while now, it is the easiest. Those having a trotting cross, are perhaps preferable; such as Abdallah and Bellfounder; as they carry greater substance and more work-horse symmetry, than the pure blood. Many of the descendants of the latter especially, we have never seen surpassed for strength, endurance, and all desirable qualities within the same compass. We speak from personal experience, and considerable observation on the subject. A valuable filly we bred from the last, out of a thorough-bred mare, and sent to a friend in Massachusetts, has trotted in harness, drawing a heavy buggy and two persons, 22 miles in something under two hours, over an indifferent road; and under the saddle, with a rider of 160 lbs., over a very hilly road, she made 19 miles in an hour and 30 minutes, and soon after, returned the same distance in an hour and 20, in which, however, she had the advantage of ten minutes detention, for turnpike and other necessary stoppages. But her excess of blood has nearly rendered her useless for the harness, having run away with some, and fairly tired out all her drivers, and she is now turned out to breeding.

But even the trotter will not give us the horse of all work, the ever-ready, ever-patient drudge, equally safe to break in the tottling Nimrods to the stirrup; to carry a grist to mill; or tote the urchins to school, strung like Wethersfield onions on the saddle and crupper; drag the wagon to town; plow out the corn; or work single or double before the oxen; or, in short, in any and every place required. He must be also, a small and not over choice feeder, keeping in good health on anything coming within his reach, oats, potatoes, hay, straw, or potato-vines; or if turned out to shirk for himself, equally capable of living on a wet marsh, or a pine woods barren; never sick, never tired, and never out of temper. If we could wrap the skin of a Suffolk Punch, or a well-made, stout Canadian Pony over a mule's carcase, with the ears and tail lopped off, it would give nearly the form and character required; and next to this, the mule, the Suffolk Punch, or stout Canadian Pony is perhaps the very best thing to be had. There is a considerable range of the Punch family in the country, which, if reduced to some regular system of style, in form, size, appearance, &c., might secure the object desired. There is a race of brown or frequently, black horses, with a dark brownish or buff muzzle like the nose of a bear, that possess extreme hardiness, and could well be incorporated into the breed required.

It is probable this every farmer's drudge, this horse of all work, could more effectually be secured by the introduction of the Norman horse, than any other equally long bred and well defined animal. This race possess all the needful strength, weight, and hardiness, when properly reared. They do not stand high in the withers, they fill a large collar, and throw great weight into it; their fore-legs are good pullers, and their hind ones good pushers; and if their head and feet are somewhat heavy, 'tis not of so much consequence, for the last prevent his sinking so deep in the mud, and the other will serve him with good masticators for his rough food, and he is not inclined to impair his constitution by carrying his extra weight over fast, abating his speed in proportion to his burden. The principal objection we note about him, is the undue quantity of hair, as we must confess to our preference for muscle over mane, and tail, and fetlock gear. But a close system of breeding with judicious females, would soon run out the surplus gaiters, which is his greatest objection, on account of robbing the road of its gravel, or the field of its soil.

Mares are decidedly more economical for farm-work than geldings, and Youatt only expresses the best experience when he says "they cost less at first, and the farmer will get a great deal more work out of them. There can be no doubt that, taking bulk for bulk, a mare is stronger and more lasting than a gelding, and in addition to this, the farmer will have her to breed from."

The horse that has performed hard service during the winter, should always be permitted a free run at grass, when the first blades put forth in spring. There are medicinal properties contained in its juices then, never subsequently afforded during the same season, which do wonders in purging away all the bad humors, or incipient diseases consequent on his *too intensely* artificial state; and his constitution, by this simple means, becomes refreshed, renewed, and invigorated, (for the individual so indulged,) tantamount to an hereditary improvement in his blood.

Among the valuable animals for agricultural purposes which have fallen under my observation, is a fine imported English cart-horse, belonging to Mr. Sotham of Albany. He will give excellent stock of the large breed of farm-horses.

R. L. ALLEN.

Buffalo, May, 1843.

GREAT WEIGHT OF BERKSHIRES.

Mr. Steddom has just slaughtered fifty-nine head of *full-blood* Berkshire hogs, of an average age of sixteen months, and of an average weight net of 329 lbs. They had no grain during summer, and were of the small prick-ear kind, and had been purposely somewhat in-and-in bred, so as to keep them rather small and fine. Mr. Harris, who packed them, says he never saw a finer lot of hogs—so light in their offal, and cut such clear pork. Dr. Keever of Ridgeville, has just slaughtered a full-blood barrow, 2 years, 2 months, and 7 days old, weighing net 616 lbs. There is another full-blood Berkshire near me, which will weigh over 800 lbs. I will give you his exact weight when killed a few weeks hence. I sold Dr. Phillips of Mississippi a young boar from Dr. Keever's imported sow, which he purchased of you, got by imported Newbury, which turns out about one story above all competition.

MUNSON BEACH.

Lebanon, Ohio, Jan. 13th, 1844.

The Cultivator gives the following account of a big Berkshire:—

Mr. Asahel Foote, of Williamstown, Berkshire Co., Massachusetts, slaughtered a Berkshire hog on the 9th of January, the dressed weight of which was 708¼ lbs.! He was 2 years and 8 months old, and had been fattening only from the 10th of June last, at which date he was estimated to weigh 300 lbs. His fare for the three months was whey with a little corn in the ear occasionally—during the last four months was Indian meal, as much as he would eat—or about 6 quarts per day. His rough fat was 80 lbs.—that of his leaves, pared unusually close, 52 lbs. each. Thickness of the heaviest of the clear pork was full 10 inches. Leaf lard, 80 lbs.

But the Louisville Journal tells the largest Berkshire story that we have yet seen of a litter of pigs, beating its tobacco-stalk all hollow.

Mr. Thomas B. Spilman of Hunter Bottom, Carroll county, Kentucky, recently slaughtered 9 Berkshire pigs, full blood, of one litter, 20 months and 6 days old, weighing 3,429 lbs. Mr. S. says that these hogs were fed as a majority of farmers feed their hogs, no more care being taken of them than is generally taken of common hogs. The weight was certified by two respectable citizens. Three weighed over 400 lbs. each. Mr. S. banters the state to beat him with one litter of the same number of pigs.

We understand from verbal conversation with a friend just come to town from St. Louis, Missouri, that there is a thorough-bred Berkshire hog in that vicinity, whose live weight is over 1,100 lbs. He is represented as being fine in all points, notwithstanding his great weight.

It will be seen from the foregoing articles, that in addition to all their other excellences, the Berkshires can accommodate themselves to any weight their breeders please; and every day's experience of their merits, only the more firmly convinces us that they are the best breed of swine ever yet known.

NEW YORK STATE AGRICULTURAL SOCIETY.

ANNUAL MEETING.

THE annual meeting of the New York State Agricultural Society for 1844, was held at the Geological Museum, Albany, on the 17th of January—the President of the Society, JAMES S. WADSWORTH, Esq., in the chair.

The first business attended to was the admission of members—89 being admitted, paying $1 each.

The Report of the Committee on Field Crops, consisting of Messrs. Hillhouse, Bement, and Howard, was then read as follows:—

The committee to whom was referred the examination of the statements of the competitors for the premiums offered by the N. Y. State Ag. Society, on "*Field Crops,*" having attended to that duty, respectfully offer the following Report:—

BARLEY.

1. To Bani Bradley, East Bloomfield, $10. Product, 140 bushels 21 lbs. from 2 acres and 21 rods.

2. To George Geddes of Camillus, $5. Product, 51 82-100ths bushels, average on five acres.

3. To Wm. Wright of Vernon, vol. of Transactions. Product, 82 bush. 22 lbs. on two acres.

INDIAN CORN.

There were three competitors for the premiums on Indian corn, neither of whom, the committee state, had sufficiently complied with the requisitions of the Society to justify the award of a premium.

WINTER WHEAT.

1. To N. S. Wright, Vernon, $10. Product, 80 bush. 55 lbs. on two acres.

2. To Wm. Wright, Vernon. Product, 73 bush. 12 lbs. on two acres.

SPRING WHEAT.

1. To Uri Beach, West Bloomfield, $10. Product, 65¾ bush. on a fraction over two acres.

RYE.

1. To Geo. M'Geoch, Jackson, $10. Product, 77 bush. on two acres.

PEAS.

1. To Geo. K. Smith, Utica, $10. Product, 46 bush. 20 quarts, on one acre and 14 rods.

2. To Myron Adams, East Bloomfield, $5. Product, 43½ bush. per acre.

OATS.

1. To Joseph F. Osborn, Port Byron, $10. Product, 109½ bush. on 1 acre, 11 rods, and 90 links.

2. To David Jones, Kendall, $5. Product, 209 bush. 11 lbs. on three acres and 11 rods.

RUTA-BAGAS.

1. To H. S. Randall, Cortlandville, $10. Product, 950 bush. on one acre and two rods.

CARROTS.

1. To Wm. Risley, Fredonia, $10. Product, 1,350½ bush. on one acre.

POTATOES.

1. To H. D. Grove, Hoosick, $10. Product, 518 bush. on one acre and 72 rods.

ESSAYS.

The President then read the Report of the Committee on Essays, from which it appeared that the prize for the best Essay—

1. On the Diseases and Insects injurious to the Wheat Crop, was awarded to John J. Thomas, of Macedon, Wayne county—$20.

2. On the Varieties and Culture of Wheat, to Rawson Harmon, Jr. of Wheatland, Monroe county—$20.

3. On the Introduction and Culture of new Agricultural Products, to John J. Thomas, of Macedon, Wayne county—$20.

REPORT OF THE COR. SECRETARY.

H. S. Randall, Esq., Cor. Secretary, not having prepared his Report, made a brief statement, from which it appeared that his efforts have been continued through the past year, with untiring zeal in behalf of the cause.

TREASURER'S REPORT.

The Treasurer, E. P. Prentice, Esq., read his annual Report, from which it appeared that there was in his hands at the last annual meeting, the sum

of	$1,843 92
Received at annual meeting from 69 members	69 00
Of Joseph Fellows, Geneva	100 00
Of James Wadsworth, Geneseo	50 00
Of James S. Wadsworth, "	50 00
Of W. W. Wadsworth, "	25 00
Of Wm. P. Van Rensselaer, Albany	25 00
Of J. M. Sherwood, Auburn	22 00
Of J. B. Murray, Mt. Morris	10 00
Of R. L. Pell, Pelham	10 00
Of A. Ayrault, Geneseo	7 00
Of Edmund Kirby, Brownsville	5 00
Of Orville Hungerford, Watertown	5 00
Of C. H. Carroll, Groveland	5 00
Subscriptions at Rochester	278 00
Monroe Co. Ag. Society	328 00
589 memberships at annual Fair	589 00
Receipts at gate in sums less than $1	1,606 78
From the State Treasury	700 00
For interest on funds	92 99
Various other sources	87 25
	$5,906 94
Advanced by Treasurer	139 63
	$6,046 57

The payments from the Treasury during the year were as follows :—

For premiums, expenses, &c	$2,956 57
Invested in Albany City stock	3,000 00
Premium on do	90 00
	$6,046 57

Mr. Denniston of Orange, introduced a resolution directing the appointment of a committee of one from each senate district, by the chair, to report the nomination of officers for the ensuing year, which, at the suggestion of Mr. Bockee, was increased to three from each district.

Mr. Randall moved as an amendment to Mr. D.'s resolution, that the committee consist of one person from each county represented, to be appointed by the delegation from the several counties, and that this committee, in addition to nominating officers, report on the place for holding the next Cattle Show.

This resolution and the amendments proposed, drew out a debate of considerable length, in which Messrs. Denniston of Orange, Lott of Kings, Johnson and Seymour of Oneida, Hodgeboom of Columbia, Randall of Cortland, Nott of Albany, and several other gentlemen whose names we do not recollect, participated.

Mr. Denniston finally accepted the proposition to amend his resolution so as to refer to the committee the question of selecting the place for the Fair, in which shape it passed, and the following gentlemen were appointed the committee to nominate officers and to select the place for holding the next Cattle Show.

First District.—Messrs. Lott and Rappelye of Kings, and F. S. Williams of New York.

Second District.—Messrs. Denniston of Orange, Bockee of Dutchess, and Youngs of Queens.

Third District.—Messrs. Hodgeboom of Columbia, Vail of Rensselaer, and Prentice of Albany.

Fourth District.—Messrs. Cheever of Albany, Delavan of Saratoga, and Clark of Washington.

Fifth District.—Messrs. Kirby of Jefferson, Enos of Madison, and Seymour of Oneida.

Sixth District.—Messrs. Mack of Tompkins, Collier of Broome, and Faulkner of Livingston.

Seventh District.—Messrs. Sherwood of Cayuga, Rhoades of Onondaga, and Randall of Cortland.

Eighth District.—Messrs. Lee of Erie, Follet of Genesee, and Backus of Monroe.

Mr. Randall submitted the following, as a proposed amendment to the Constitution :—

Resolved, That the Presidents of County Agricultural Societies shall be ex-officio members of the Executive Board of the N. Y. State Agricultural Society.

On motion of Dr. Beekman,

Resolved, That the President of the Agricultural Society of the State of New York be authorized to appoint three individuals, members of the Society, whose duty it shall be for each to read an essay on some subject connected with agriculture, and that the essays be read at the meeting of the Society in January next.

On motion of Mr. O'Reilly, resolutions were adopted—1. That a committee of seven be appointed to compile and make arrangements for the publication of volumes from the Prize Essays of the Society, of suitable size for Common School Libraries—2. That a premium of $100 be offered for the best series of Essays "on the importance of scientific knowledge in prosecuting successfully the ordinary pursuits of Agriculture"—said series to be published also in one or two volumes suitable for the School District Library, the author being entitled to the copy-right. The committee subsequently appointed by the newly elected President, (Dr. Beekman,) in reference to these publications, consists of the Hon. John Greig of Ontario, Gov. Seward of

Cayuga, Lieut. Gov. Dickinson of Broome, John A. King of Queens, James S. Wadsworth of Livingston, Judge Savage of Washington, and Henry O'Reilly of Albany.

The committee on nomination of officers, &c., reported that they had agreed upon *Poughkeepsie*, as the place for holding the next Cattle Show of the Society.

They reported a nomination of officers, which, after an amendment, was accepted as follows :—

JOHN P. BEEKMAN, Columbia, *President.*

Vice Presidents.

1st Dist.—JAMES LENNOX, New York.
2d Dist.—THOMAS L. DAVIES, Poughkeepsie, Dutchess.
3d Dist.—JOEL B. NOTT, Guilderland, Albany.
4th Dist.—JOHN SAVAGE, Salem, Washington.
5th Dist.—EDMUND KIRBY, Brownsville, Jefferson.
6th Dist.—GEORGE J. PUMPELLY, Owego, Tioga.
7th Dist.—H. S. RANDALL, Cortland Village, Cortland.
8th Dist.—RAWSON HARMON, Jr., Wheatland, Monroe.
BENJAMIN P. JOHNSON, Rome, *Cor. Secretary.*
HENRY O'REILLY, Albany, *Rec. Secretary.*
THOMAS HILLHOUSE, Albany, *Treasurer.*

Additional Members of the Executive Committee.—George Wilkinson, Poughkeepsie; J. M'D. M'Intyre, Albany; George Vail, Troy; Alexander Walsh, Lansingburgh; Joel Rathbone, Albany.

The nominating committee reported the name of James S. Wadsworth for re-election as President, and Luther Tucker for re-election as Recording Secretary—both of which nominations were unanimously approved by the Society. But both of the individuals named, were compelled, by other avocations, to decline a continuance in their respective offices. E. P. Prentice, who was on the nominating committee, declined a renomination as Treasurer, which was warmly pressed upon him.

The Society assembled in the evening at the Capitol, where the newly-elected officers took their respective stations. After some brief remarks from the President in reference to the duties which he had just been elected to discharge,

The Annual Address was delivered by Mr. Knevels of Dutchess county. The address was replete with facts and arguments illustrative of the importance of agriculture in all its branches, and in its varied connexions; and was listened to with marked attention during the hour and a half which its delivery occupied.

In addition to members of the Society, the Assembly Chamber was filled with other citizens, embracing various distinguished friends of agriculture from different parts of the state. Among them were ex-President Van Buren, Lieut. Gov. Dickinson, several of the state officers, members of the legislature, &c.

Resolutions were passed, tendering the thanks of the Society to Mr. WADSWORTH, President—to Mr. PRENTICE, Treasurer, and to Messrs. RANDALL and TUCKER, Secretaries of the Society, for the able and faithful manner in which they had discharged the duties devolving upon them while occupying those stations.

On motion of Major Davezac of New York,

Resolved, That the thanks of the Society be tendered to Mr. J. W. Knevels for the able and instructive address delivered by him this evening, and that he be requested to furnish a copy for publication.

On motion of Mr. S. Smith of Putnam,

Resolved, That a committee of three persons be appointed to petition the Legislature to extend the operation of the existing law for the promotion of agriculture, and for other purposes.

Mr. John Dickson of Ontario county, gave notice that a motion would be made at the next annual meeting of this Society, to amend the Constitution thereof, so as to give to the Society, instead of the Executive Committee, the power of fixing the place where the Annual Fairs [Shows] are to be held.

On motion of Mr. Daniel Lee of Erie,

Resolved, That this Society regards the establishment of an Agricultural Institute and Pattern Farm in this state, where shall be taught thoroughly and alike, the *Science*, the *Practice*, and the *Profits* of good husbandry, as an object of great importance to the productive agriculture of New York.

The Society then adjourned.—*Cultivator.*

NORTHERN CALENDAR FOR MARCH.

MAPLE SUGAR should now be made by all who have trees suitable for it. The business may commence at the first running of the sap, whether in February or March, and continue as long as the nights freeze.

It is estimated that the state of Vermont, with a population of less than 300,000, made over 6,000,000 lbs. of maple sugar, in 1842, besides the syrup. This is a large item in the productive industry of a single state. If properly tapped, the trees are not injured. This may be done with a 1¼ inch auger, slanting the hole downward to the depth of 1½ inches, so as to form a cup; or a square hole may be made with a chisel and mallet. Another hole should then be bored with a spike gimlet, slanting upward, so as to draw off the sap from the cup formed above, and into this hole a tube of elder or other kind must be closely fitted. From one to three holes may be made according to the size of the tree; though no trees ought to be tapped of less than twelve or eighteen inches diameter. Many practise boring their holes with a ¾ inch auger, slanting upward, and fitting an elder tube, from which the pith has been removed, of the full size of the hole. All the vessels used for the sap should be perfectly clean. As soon as drawn from the trees, strain the sap and boil in sheet-iron boilers, containing about five pails each, reducing twenty of sap to one of syrup. Then add the white of two eggs to three gallons of syrup, and stir till it boils. After the scum is collected, strain through flannel, and again boil till it will rope an inch, then pour into pans till it grains. After this place it, in wooden drains filled with gimlet holes and tapering to the bottom. To make into cakes it must be boiled till it will stir dry in a spoon. Care must be taken to prevent scorching during any part of the process.

Prepare ground now for hemp, tobacco, sweet potatoes, and castor beans. If any hemp remain unbroke, it should be dressed with all possible despatch.

Cattle must be closely looked after, and not allowed to wander in the roads or fields, dragging themselves through the mud and poaching on meadows, without any benefit to themselves. Still keep them sheltered and dry, and if they get well through this month they will be safe enough on pasture thereafter. Look well to the animals with young, especially such as are near their time, and give them a little extra feed, good hay, roots or meal. This helps them along over their troubles very much, and enables the young to get on their feet at once. Immediately on dropping the young, let the bag of the dam be well drawn, which, if not done by the offspring, should be done by the hand. Light food and in small quantities should be given for three or four days, when the animal may be gradually put on its full rations.

Grass seeds may now be sown, not in the stinted way too often practised, but *liberally*. Many fields produce but half a crop for the sole want of plants enough to draw up the nourishment they could otherwise furnish, and weeds come in to supply the place of what ought to have been occupied by grass. Many practise sowing on the snow, which settles away and leaves the seed to occupy the ground which has been well prepared by the operation of the frost. For permanent meadows, several kinds of grass should be sown on the same field. Save your own clover, herdsgrass, &c. You can then afford to seed more plentifully, and *it is the most profitable crop a farmer can raise*, at the prices they have borne for the last four years. Get out all the manure to the fields that can be done, and spread it broad cast. Nothing is lost by this method; it warms the earth and decomposes rapidly, and is particularly beneficial to meadow lands.

Kitchen Garden.—Continue the directions given in January and February. Transplant into new hot beds the cucumbers and melons that were sown last month. Cauliflower plants raised from seed sown last month, as soon as they are three or four inches high, should be pricked into a new hot bed. Cabbage plants should be gradually inured to the open air, and as soon as the weather is sufficiently favorable, they can be planted in the open ground for heading. Seeds of cabbage, cauliflower, radishes, &c., can be sown in a warm border on the south side of a stone wall or close fence, as soon as the frost is entirely out of the ground, and mild weather has fairly set in. At the same time, sow a full crop of peas, kidney beans, spinach, parsneps, carrots, beets, onions, turneps, parsley, potatoes for early use, lettuce, &c. Transplant into the open ground the lettuce from the hot beds. Sow in hot beds seeds of the red pepper, tomato, and egg plant, to be planted in the open ground early in May.

The asparagus bed should now be forked and dressed, and new plantations can be made. In making plantations of this, as also of all other vegetables, the beds should be plentifully manured; and it should be constantly borne in mind, that superior vegetables can not be obtained, unless the soil is highly fertilized by abundant and repeated applications of manure.

Fruit Garden and Orchard.—When the weather is open, fruit-trees may be planted any time in the month. Gooseberries, currants, and raspberries, can still be pruned when it has not been before done. The former should be well manured and cultivated. If not done previously, strawberry beds should now be uncovered, hoed, and cleaned. New beds can also be planted out, although they will not bear as well as those planted the fall previous. It should be borne in mind, that the fruit as well as the vegetable garden, will afford much superior produce when it is well cultivated and highly manured. The cultivator will be amply remunerated for any extra trouble or expense.

Flower Garden & Pleasure Grounds.—As soon as the bulbs begin to break the ground, take off the litter carefully, and also uncover the shrubs and flower borders. Sow in hot beds a general assortment of annuals for early blooming. Dig up and put in order the flower borders that they may appear neat, and be ready to receive annual and other plants from the hot bed. In the latter part of the month, transplant biennials and perennials. Dig around the trees and shrubberies. They will grow better with cultivation. As soon as the ground is open plant diciduous, ornamental trees, and shrubs; evergreens will do better in May or June. Let the trees have plenty of room; it is a great error in planting to allow the trees so little space, that when they become large they must necessarily be spindling. Plant box edging and hedges, hoe and clean the flower garden throughout. Roll the lawn and put the gravel walks in order, trim the edges of the turf, and give it a top-dressing of lime or ashes when it is necessary.

SOUTHERN CALENDAR FOR MARCH.

In the early part of this month, if the season has not required it before, select your ground for your tobacco crop. It should be a rich sandy loam, capable of retaining moisture, and the more level the better. Plow or dig up the surface at least twice before planting, and level well each time. As soon as the young plants acquire a leaf the size of a dollar, take the advantage of the first wet or cloudy day, and commence setting them out in rows about three feet apart from north to south, and two and a half feet apart from east to west. In taking the plants up from the nursery, the ground should be first loosened with a flat piece of wood or iron, about an inch broad; then carefully holding the leaves closed in the hand, draw them up, and place them in a basket to receive them for planting. The evening is the best time for setting out plants, but it can also be done in the morning. Those set out in the morning, unless it be cloudy or rainy, should be covered during the day with palmetto leaves or other substances. Water the plants morning and evening until they have taken root. Fill up all vacancies where the plants die, with new ones.

The first fine weather after the twentieth of this month, commence planting your cotton seed. Put in one half of your crop ten days before the remainder, in order that you will not be too much driven in your harvest. Moisten your seed, and roll it with ashes and earth, and it will vegetate earlier, and will require a less quantity per acre.

After your ground is well plowed and prepared by dikes and ditches for inundation, sow your *lowland rice* broadcast, at the rate of a bushel, or a bushel and a half to an acre, and harrow it with a light harrow, having many teeth. Immediately after sowing, inundate the ground with water for three or four days, or until the rice begins to swell, and then shut it off. As soon as the young rice is about three inches high, let the water in again so as to leave their tops just above the surface and let it remain until ten days or a fortnight previous to harvest, when it should be drawn off.

Plant Indian corn if it was not done last month. Harrow and weed it, as soon as it is large enough. Attend to the sugar-cane, hoe and keep it clear of weeds.

Bed out sweet potatoes as early as the season will permit. Place them on the level of the ground previously dug up and raked even, as near as you can without touching; then cover them three or four inches, out of a trench dug all around the bed; this trench keeps the superabundance of water drained off, and therefore, the bed warmer. A bed 40 feet long and 5 wide, will plant 15 or 20 bushels of potatoes. When there is no danger of frost, scrape off part of the covering; and thus enable them to vegetate earlier. Give the ground a liberal coat of manure. Have coops in readiness for young chickens—early ones are best.

What was delayed last month may be successfully done in this. Set out your plants from your hot-beds —plant French beans—all kinds of melons—cucumber and tomato seeds—red peppers for pickling—celery seed for next winter, which must be set out when at a proper size, and let grow all summer, when it must be blanched. Transplant aromatic herbs, trim lemon and orange trees, procure the Brazilian variety of naval orange from St. John's river, East Florida, if possible. Sow millet-grass about the 20th of this month, manure the ground well, and you will be repaid for the trouble. Hoe the cabbages and lettuce which were transplanted last month, every ten days.

See Northern Calendar for May and June.

We have had the following communication and another from the same source, (which we shall insert in our April No.,) some time on hand; but owing to a great press of other interesting matter, and wishing to satisfy ourselves on a few particular points before publication, have delayed printing them till now. We deem these articles of great interest to the wool-growing public, and bespeak for them a careful perusal.

PAULAR MERINOS.—No. II.

Having been absent from the city for several months past, I have hardly seen the late numbers of the Agriculturist, nor found leisure to examine their contents. An hour spent with you and your correspondents is to me always interesting, and is a pleasure, to which I have just now treated myself; the first enjoyment of the kind for a long time past. In casting a glance through your pages for the last few months, I notice in the October No., at page 212, an article from the pen of Mr. Solomon Jewett, evidently intended as a reply to my remarks, that appeared in your paper of March last, upon his sheep, miscalled Paulars. I also now perceive, that among your "notices to correspondents," in the September No., you committed me to a sort of *necessity* of *replying* to Mr. Jewett, and of replying *early*. This had either wholly escaped my attention at the time, or I had since forgotten it. I hope that neither you nor your readers, nor Mr. Jewett especially, have been impatient for my rejoinder.

In exposing and denouncing, as I did in your May No., the *counterfeit* Paulars, I beg you to believe, that in thus fulfilling the obligation of a public duty, nothing was further from my wish or intention, than to get engaged in a newspaper controversy. And now, in reading Mr. Jewett's article, I really see but very little, if anything, in it, which requires a reply from me. Indeed I do not know that I should make any, were it not that a worthy and intelligent friend at my elbow, informs me that some persons, (mostly however among Mr. Jewett's friends,) have inferred, or *pretended* to infer, that my delay in responding to him, was because his positions were so impregnable, that nothing *could* be said in refutation of them. Such a supposition, if in earnest, is truly laughable! Rather than that such an unwarranted and ludicrous inference should be drawn from my silence, Mr. Jewett shall, without further delay, receive the notice which he covets; for though what he has written really requires no reply, yet as the general subject is one of importance, and of great public interest at the present moment, and on which a good deal more can be usefully and profitably said, I trust that in renewing and extending my remarks, the public good may thereby be promoted.

But it is due to my own inexperience as a writer for the public eye, that in dealing with so practised an adversary as Mr. Jewett, I should not consent to his getting up any *false issues* in the case, nor allow him cunningly to draw me off from the plain and strong ground I first occupied, and which I expect fully to maintain.

Let me "define my position" a little, and clear away some of the rubbish and fog which Mr. J. has attempted to draw around me. My former communication will speak for itself, as to what I really *did* say. But as to what I did *not* say—in the first place, I did *not* say nor intimate, (as Mr. Jewett would insinuate,) that the real Paular sheep of Spain, are, as regards "*fineness* of fleece, equal or superior to the *Saxons*." I have thrown out no such idea. I have instituted no such comparison. I made no sort of allusion to the comparative degree of fineness of fleece between Paular Merino and Saxon wool. It is well known to all, that none of the Spanish wool equals in *fineness* that of Saxony. But I did not even say that the Paular wool was the finest of all the *Spanish* Merino flocks. I only said that it was "*among* the finest and best," which assertion was not made without good authority, though it is well known that the *Escurial*, and perhaps some other of the travelling Merino flocks of Spain, yield *finer* wool than the Paular flock. No one questions or doubts this. But that does not make the Paular wool very *coarse* and *bad*, like that of Mr. Jewett's *pictured* and much *vaunted* Vermont ram.

I spoke particularly of *that ram*, of which, and of his great and heavy fleece, so much had been said by Mr. Jewett, and boastingly set forth by him in various publications, (obtruding the beast on the public, or at least inviting attention to him,) that the ram, or his character and peculiarities, had thus become in some sense public property. The public had an interest, a *great* interest, in knowing the *truth* in regard to him, if it could be ascertained.

In my former article, which has so disturbed Mr. Jewett, I expressed a confident opinion, which subsequent examination and inquiry have most fully confirmed, that the ram in question was "*not* a genuine Paular, *nor a pure-bred Merino of any sort*, but a *mongrel* sheep of some kind or other, probably having a cross of some sort of large English mutton-sheep, just by way of improvement."

I did *not* draw any comparison between Saxon *wool*, and the harsh, wiry, and coarse covering of the Jewett ram. As soon compare "Hyperion to a satyr!" or fine linen muslin to the coarsest Kentucky bagging. I should really much sooner have thought of dog's hair as a standard of comparison for the ram's fleece; for to that it bears a closer and stronger affinity. In my candor, I only compared it with English South-Down wool—and assuredly it is not in any respect *better*. The comparison with South-Down was not an unfair one; unless, indeed, the breeders of those excellent mutton-sheep, which furnished me the comparison, should feel that they have reason to complain of the liberty I have taken, which in truth I understand some of them have done, though I think without any just ground, the South-Down fleece not claiming a place among the *fine*, *soft*, and *valuable* wools, the merit of that breed lying rather in the good form of its *carcase*, and its excellent, fine-flavored *mutton*, to the *quality* of which I take pleasure in conceding the well-deserved palm of superiority.

Though in asserting the fact, that the covering of the Jewett ram was very coarse, and in my judgement "not entitled to be classed among the fine wools," I did not think of anything so ridiculous as the instituting of a comparison between the ram's wool and that of *Saxon* sheep, or those having a *cross* of Saxon blood, yet Mr. Jewett may himself do so, if he likes; and it is believed that he *can* do it too, without going beyond *his own* flock, for the *Saxon* mixture. Hence, the explanation of his being able to show fine *samples* of wool, and to exhibit sheep bearing fine wool. But did you not say, (I hear your readers inquire,) did not Examiner say, the ram's wool was very coarse and bad? I answer yes, and I have now solved the problem for you; all difficulty and inconsistency on my part, vanishes when we come to use our common sense and our eyes, and see the fact that Mr. J.'s *fine* wool and his *coarse* does not always grow on the same *sort* of sheep, or on those having the same kind of blood. And then, too, if we were near enough to see things as they really are, it would be found that Mr. J.'s *fine* sheep do *not* produce fleeces of *clean* washed wool weighing 14 lbs., nor yet 12 lbs., nor even 10 lbs. Neither do I believe that his *coarse* sheep cut even the lightest of those weights, unless gummy and dirty, and perhaps after being for a length of time highly fed, and kept in a "hog-fat" condition.

With full knowledge of all this, I should of course not think of denying that Mr. Jewett has in his possession fine-woolled sheep producing wool fine enough to satisfy any reasonable demand for fineness, and to justify, I dare say, the price which he says he gets for his wool. But I beg leave to pity and condole with the buyers, if they have to take, in the lot, many of his precious "*Paular*" fleeces resembling that of the ram in question!

And here I cannot in justice avoid remarking, on the unfair, not to say deceptive, character and effect of giving out and publishing to the world, the value or price obtained for his wool, in such manner as to give the impression that it was the fair market value of such stuff as comes from the "pictured" ram in question. It certainly might very naturally convey that idea, to the generality of hasty and careless readers, though I will not say that such was its intention, for it is to be presumed that Mr. J. is too honorable a man to wish or even be willing thus to mislead the public. Surely he does not mean to say, nor be understood, that the covering that grows on that ram, or anything of like character, would have sold in July last, (the date at which he wrote,) for 37 cents per pound! No, not to any man in his senses; nor for over *half* that price, to any shrewd-judging or intelligent buyer, at all acquainted with the *quality* of wool. I do not hesitate to affirm this. I proclaim it as being *true*, knowing that it is due to the public at large, and especially to many wool-growers, who have an interest in knowing the *truth* of the matter. Mr. Jewett says that his "Paular wool is filled with gum, yolk, or oil before cleansing"—and *afterwards*, too, I presume he might have said, without overstepping the fact, so far as the *gum* is concerned, if that ram is to be taken as a fair specimen, and if, by cleansing Mr. S. meant, (as he doubtless did,) washing in pond or brook water before shearing. This is, however, to do him justice, a candid admission on his part, for which he has due acknowledgment. I have myself always been accustomed to make a distinction, and a pretty *broad* one too, between "*gum*, yolk, and oil," so called, as existing in the wool of Merino sheep. But not intending this for a learned disquisition, I will not now enlarge on, nor go into an analysis of, the nature and qualities of those substances.

Lest I should be thought by any one to have written in a harsh or unfair spirit toward Mr. J. and his sheep, I would, in proof of the truth and literal correctness of what I said before, and of what I have now said herein, as to the extreme coarseness and bad quality of the covering of that Jewett ram, refer you (and any of your readers who feel an interest in the subject,) to the sample of his wool in your own possession, which I presume, by your leave can now be seen and examined at your office in New York, by those who are, like myself, curious in those matters, and fond of seeing with their own eyes. As to the *fairness* of the sample, it is probably enough to say that it was, as I understand, furnished by Mr. Jewett himself, who would of course not be likely to select the *worst* locks of wool as a specimen of his favorite sheep. By examining some of the *finer* samples of Mr. Jewett's wool, on the same card, and furnished by him at the same time, you, and those among your readers who are familiar with the subject of wool, and critical judges of the article, will find in its peculiar character abundant and satisfactory evidence of its having partaken of the *Saxon* mixture. To all good and close judges, it tells its own story; indeed, so plainly, that "the man who runs may read." Look at, and examine it for yourself, Mr. Editor; and let your readers and the public call at your office and do the same. Let them examine, and then say whether those sheep are of *any* particular or *pure* breed; and especially, whether those different samples are, or by any possibility *could* be, the produce of one and the *same* breed.

If any of your readers want to know what is *gum* in distinction from *yolk*, in wool, let them examine and *feel* your sample from that Jewett ram, which he says yielded a fleece weighing 14 pounds! (Fourteen pounds of what?) They will then, after seeing for themselves, be able to judge not only of its *quality*, but also, if they happen to be *Yankees*, can give a pretty good *guess* as to its probable degree of cleanness—or in other words, whether the 14 pounds was mostly made up of *wool*, or of *gum*, dirt, or foreign matter, which does not enter into the composition of cloth, and for which our wool-buyers and manufacturers can not afford, and will not any longer consent, to *pay*. They can also then judge whether such wool has been worth in market, at any time within a year past, 37 cents per pound.

Speaking of *gum*, a person with his eyes shut, a *blind* man, having any sense of *touch* in his fingers, one would think might easily be able to *feel* the gum in that ram's wool. Though brook-washed, on the sheep's back, it would, after being shorn, lose *at least one half its weight*, (and probably considerable more,) by anything like thorough cleansing, such as a manufacturer has to give it before working: and then what would be left of it, would be of a grade worth a good deal less than 37 cents per pound. Facts are stubborn things, I well know; but still we farmers and wool-growers, who have a living to get, want to see and look at things somewhat as they really are. You, Mr. Editor, must not only permit us to do so, but as far as in your power to do it, lend us a helping hand.

I find that I have not yet even fully "opened" Mr. Jewett's case, and that of his Vermont Paulars. Indeed, I have as yet hardly begun. To do them anything like justice, so as to satisfy Mr. J. and the public, will require more space than you can at this time afford to the subject, which I assure you is very far from being exhausted; on the contrary, depend on it, the vein will grow richer as we go deeper and proceed farther in working it. All this is but prefatory. I propose to handle the subject (now I am hold of it) "without mittens," as the saying is, though of course with all possible courtesy which the case admits of, consistent with what is due to truth and the public interest.

EXAMINER.

New York, Nov. 18th, 1843.

INDIGO IN LOUISIANA.—The article has been pronounced by competent judges as being not inferior to the best Caraccas indigo, selling at $2 per pound. The editor of the Baton Rouge Advocate says: One acre of ground well cultivated, in West Baton Rouge, will yield from forty to sixty pounds; that it requires only from July until October for cultivating it; that there is not connected with it one third of the expense or time that is generally required for the cultivation of cotton. He therefore intends in future to turn his attention to the cultivation of indigo in preference to cotton.

FOREIGN AGRICULTURAL NEWS.

By the arrival of the Steampacket Hibernia, we are favored by full files of our European journals up to the 4th of February.

Markets.—*Ashes* have declined, and are slow of sale. *Cotton* has advanced from ⅛ to ¼*d.* per pound during the past month, and an enormous business been done in it. The unprecedented number of 109,570 bales having changed hands in a single week, and the sales for the preceding five weeks were 355,000 bales, against 127,000 during the same time last year, while the import has been 74,000 bales less. The Pacha of Egypt has ordered an advance of considerable extent on all his cotton in the European market. Stock on hand at Liverpool on the 1st February, 625,000 bales, against 522,000 same time last year. *Cheese* of a fine, fat, well made quality, is in good demand. *Beef, Hams,* and *Pork,* selling moderately. *Flour, Lard,* and *Tallow,* dull. *Flaxseed* brisk, an unusual quantity will be sown in England this year. *Rice, Tobacco,* and *Naval Stores,* a steady demand. *Seeds* unaltered.

Money is very abundant, and interest as low as ever again. The bullion in the bank of England is upward of £13,000,000, (about $62,000,000.) *Stocks* of all descriptions are on the advance.

Business generally is active, and the people well employed—a marked improvement has taken place over the corresponding period of last year.

Steam-Plow.—This instrument continues to work favorably in morasses and bogs where horses can not be introduced.

Longevity of Horses.—Mr. Blair speaks of three horses which he knew, that died at the ages respectively of 30, 37, and 39 years. Mr. Percival mentions one that died in his 62d year.

Waste Land in Great Britain.—It is estimated that there are at least 30 millions of waste land in Great Britain, one half of which is susceptible of cultivation.

Sheep in the British Isles.—These exceed 30 millions in number, which is 10 millions more than we have in the United States, and yet how small their territory compared with ours.

Alpacas in England are fast being naturalised. They prosper well, and their fleeces also improve under the care bestowed upon them—they now shear usually from 10 to 13 lbs. each. Peru produces about 5,000,000 lbs. of Alpaca wool. Its texture is nearly like silk, and it makes a cloth highly prized by the Spanish ladies. We often saw these beautiful animals when in England. Our climate would suit them well, and we wish some gentleman in this neighborhood would undertake their introduction into the United States.

Cochin China Pullets.—At a dinner recently given by the Queen of England at Windsor Castle, among other good things served up on the occasion, we notice were several Cochin China pullets, which weighed between 6 and 7 lbs. They had been reared and fattened at the royal aviary.

Manuring Strawberries.—There appears an undue fear of manuring strawberries. I have read somewhere that all plants that throw out suckers or runners rapidly deteriorate the soil, and that a power of escape to new ground is given by the runners. If this is correct, it is a reason for the good results I have always seen of manure. How rarely, except where strawberries are grown for profit, do we see room enough given. Beds of strawberries are objectionable for this reason, and it is this cause rather than manure that leaves are more abundant than fruit. I have tried and proved this. Where strawberries are grown for profit, (that is, grown at all in the true sense,) they should be planted in rows—the large sorts not less than 30 inches in the row, and 15 inches from plant to plant, and no runners suffered to remain. By these means, with deep trenching and early planting, any sort worth cultivating may be grown large and abundantly.

Mr. Colman.—We understand that Mr. Colman has nearly recovered from the effects of the accident of being thrown from his horse when visiting a farm near London, and that he is rapidly writing out his tour. The public may expect to see the first number shortly.

Horticultural Mission to China—Mr. Fortune from the English Horticultural Society arrived in China on the 9th of July last, and had every facility rendered him for prosecuting his labors. When last heard from he was preparing to visit the northern provinces.

Shed feeding of Sheep.—Since Mr. Childer's experiments of the great saving of food and greater gain in weight of sheep fed under cover, sheep feeding under sheds is rapidly increasing in England.

To Kill Worms.—Use a solution of corrosive sublimate.

Destruction of Snails by Common Salt.—Having strewed some common salt upon the ground, I placed a number of snails among it; all those that came out of their shells and touched the salt, immediately threw out a greenish globular froth, and in a few minutes were dead.

Early Standard Currant-Trees.—As a matter of fancy, I have for some years grown currants as standards; and observing the constant crop that clusters round the head, and the little room they require, I potted about this time last year several three-year-old trees, and placed them on the back stage of a greenhouse; they bloomed and set their fruit well, and ripened about five or six weeks earlier than the out-door fruit. They were trained with small heads, and with the ripe fruit were remarkably showy. They are very easy to manage. The cuttings should not be shortened back, but disbudded to the top bud, repeating the disbudding till it reaches the required height. A plant three years from the cutting yielded in my greenhouse about three pints of fruit.

To keep Mice from Peas.—Having tried a number of plans for preventing mice from destroying winter-sown peas, I have found none so effectual as the following: Steep the peas a short time in salad oil, and then dust them all over with rosin ground to a fine powder, then sow them immediately afterward.

Enormous Egg.—An egg was this week laid by a goose at a farm in Quermore, near Lancaster, whose weight was 10 ounces, its circumference longitudinally was 10¼ inches, and it measured 8¼ inches round.

Large Onions.—An average sample of 15 onions, which weighed upward of 10 lbs., was grown on a small croft in the fertile village of Longton, near Preston, which had been sown with 5 lbs. of seed from the same ground. It is supposed more than as many tons have been gathered.

Twine for fastening Wall Trees.—In training plants and fruit-trees to the wall, I have for some time used twine dipped in linseed oil, and dried, instead of bits of cloth; it is neater, more convenient, and affords no harbor for insects. Drive the nail into the required place, slip a tie with the twine over the head, bring the branch down and secure it with a knot. A tree secured in this manner is capable of being better trained, the branches better secured, and the whole appearance more workmanlike.—Gar. Chron.

Editor's Table.

THE WESTERN FARMER AND GARDENER'S ALMANAC, FOR 1844, edited by A. Randall, published by E. Morgan & Co., 13 Main street, Cincinnati. This is a duodecimo of 114 pages, containing a brief northern and southern calendar, together with much other matter useful to the farmer. It is handsomely embellished with numerous wood cuts, which we presume are from the pencil of Mr. Foster. The price is 25 cents, and if it were a dollar, the work would be well worth possessing. We recommend it to the farmers especially at the west and south, and hope it may have a large sale.

THE NEW GENESEE FARMER commenced its 5th Volume on the 1st January last, and continues its quarto form of 8 pages monthly, for 50 cents a year. Dr. Daniel Lee of Buffalo, among the most able agricultural writers of the day, and T. C. Peters, Esq., one of our own best correspondents, are now associate editors with Mr. Bateham, in the Farmer. It ought to have a large subscription list.

TRANSACTIONS OF THE ESSEX AGRICULTURAL SOCIETY FOR 1843; an octavo pamphlet of 111 pages, for which we are indebted to the Secretary, the Hon. Allen W. Dodge. The address is by Mr. Saltonstall, and a capital good one. The report on plows is a valuable document; that on cows shows good milkers of the native breed; while the one on swine, "henceforth to be the *lights* of the world," gave us many a hearty laugh. But we can not give further particulars, save that we see fruit and forest-trees reported upon, and some other things to which the societies in this state have not yet turned their attention. It would be well for them to copy the example of old Essex.

TRAVELS IN THE CALIFORNIAS, and Scenes in the Pacific Ocean; by Thomas J. Farnham, author of Travels in the Great Western Prairies, the Anahuac, and the Rocky Mountains, and in the Oregon Territory, in Nos. of 96 octavo pages each, price 25 cents. Mr. Farnham is a very pleasing and intelligent writer, and all who feel any interest upon the subject of the Californias, the next country destined to be settled by our nomadic tribes, can not do better than to purchase these graphic Travels.

SECOND ANNUAL REPORT, by Henry S. Randall, Superintendent of Common Schools of Cortland county; together with a special report on Common School Libraries. We have merely had time to glance our eye over this report of Mr. Randall, and what little we read we liked; but why are not agricultural books mentioned by him? it certainly can not be that he undervalues their importance, when he himself is one of our most pleasing writers on this subject.

THE YOUNG GARDENER'S ASSISTANT, in three parts; containing Catalogues of Garden and Flower Seeds, with practical directions under each head for the Cultivation of Culinary Vegetables and Flowers; also directions for Cultivating Fruit Trees, the Grape-Vine, &c.; together with select sorts of the same; to which is added a Calendar to each part; showing the work necessary to be done in the various departments, each month of the year—the whole adapted to the climate of the United States. Tenth edition, improved; by Thomas Bridgeman, Gardener, Seedsman, and Florist, with a portrait of the author: New York, 1844; for sale by Saxton and Miles, 205 Broadway.

This is a handsome octavo edition of upward of 500 pages, containing in fact three works in one, by one of the oldest, most experienced, and practical writers on Horticulture in the United States, and the title which we have copied at length, above, contains the best idea that we can give of this work. When the reader is informed that this is the Tenth Edition, he will be satisfied that a discriminating public have pronounced it the best and most complete on Horticulture yet issued from the American Press. The price is $2.

THE FRUIT CULTIVATOR'S MANUAL, THE KITCHEN GARDENER'S INSTRUCTOR, AND THE FLORIST'S GUIDE, comprised in the above volume, are also published in separate parts, and may be had bound in boards, at 50 cents each.

PROCEEDINGS OF THE NEW CASTLE COUNTY AGRICULTURAL SOCIETY AND INSTITUTE, at the Eighth Annual Meeting, held at Wilmington, September, 1843, with the address delivered by William Darlington, M. D. This is an octavo pamphlet of 58 pages, the reports of which are to the point, and appropriate. Dr. Darlington, the celebrated botanist, made an admirable address, in which, among other things, he forcibly points out the advantage to the farmer of making himself acquainted with scientific names of plants, &c., which most immediately concern him.

Great Dairy Qualities of a Devon Cow. Mr. C. P. Holcomb of New Castle, Delaware, has a Devon cow called Lady, which produced 19 lbs. of butter in a single week, and averaged 14 lbs., 9 oz. for 12 weeks. Who now shall say that the Devons are not good dairy cows, especially where making butter is concerned? Lady was awarded the first premium at the Newcastle Agricultural Show, and well she deserved it.

American Hemp going to England.—We understand that a house in St. Louis has engaged to send 1,000 tons of hemp to England the ensuing season.

SIMULTANEOUS COMMUNICATIONS.—We have on hand, recently sent us, several communications which we find are also furnished other papers simultaneously with us for publication. We now say to all correspondents that we want no more such. If a communication can not be sent to us solely, and allow sufficient time for it to appear in our columns before another paper makes use of it, however valuable it may be, we do not wish to receive it. In all such matters we are determined hereafter to stand first or not at all.

TO CORRESPONDENTS.—We have been favored with a shower of communications the past month, which shall have a place as fast as we can find room for them. We had selected a number of excellent articles from other journals for publication; but so long as our correspondents continue thus to favor us, we shall devote the paper mainly to them. We had several editorials written for this No., which we have thrown out, and have also cut down the Foreign Agricultural News department, and Editor's Table, each of which we wished to extend. These, however, we shall enlarge hereafter. Several articles announced last month we have not found room for, and have since received communications from Thomas Addis Emmet, Americus No. 5, J. S. S., Robert L. Pell, A Traveller, B. G. Boswell, Examiner No. 3, T. W. Coit, H. E. M., William R. Prince, A., Philip Winfree, Cornelius Baker, L. Bostwick & Co., and J. H. Lyman.

The attention to agriculture is greatly on the increase, and a renewed spirit is reviving in our land. The farmers seem disposed to arouse themselves from their late lethargy, at least we so judge from our greatly increased subscription list. But we find our paper is still unknown in many parts of the Union, and shall feel greatly obliged to our friends to take every possible pains to extend a knowledge of it. Never mind giving away an occasional number, we will gladly always freely replace it.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, FEBRUARY 22, 1844.

ASHES, Pots,	per 100 lbs.	$4 62	to	$4 75
Pearls,	do.	5 06	“	5 12
BACON SIDES, Smoked,	per lb.	3½	“	4½
In pickle	do.	3	“	4
BALE ROPE	do.	6	“	9
BARK, Quercitron	per ton	23 00	“	24 00
BARLEY	per bush.	56	“	59
BEANS, White	do.	1 25	“	1 75
BEEF, Mess	per bbl.	5 88	“	7 00
Prime	do.	3 88	“	5 00
Smoked	per lb.	5½	“	7
Rounds, in pickle	do.	3	“	5
BEESWAX, Am. Yellow	do.	28	“	31
BOLT ROPE	do.	12	“	13
BRISTLES, American	do.	25	“	65
BUTTER, Table	do.	12	“	20
Shipping	do.	6	“	10
CANDLES, Mould, Tallow	do.	9	“	12
Sperm	do.	30	“	38
Stearic	do.	20	“	25
CHEESE	do.	4	“	7
CIDER BRANDY, Eastern	per gal.	35	“	40
Western	do.	28	“	35
CLOVER SEED	per lb.	10	“	11
COAL, Anthracite	2000 lbs.	5 00	“	5 50
Sidney and Pictou	per chal.	5 75	“	6 25
CORDAGE, American	per lb.	11	“	12
CORN, Northern	per bush.	48	“	50
Southern	do.	46	“	48
COTTON	per lb.	8	“	12½
COTTON BAGGING, Amer. hemp	per yard.	16	“	18
American Flax	do.	15	“	16
FEATHERS	per lb.	25	“	31
FLAX, American	do.	8	“	8½
FLAX SEED, rough	per 7 bush.	9 00	“	9 75
clean	do.	10 00	“	11 00
FLOUR, Northern and Western	per bbl.	4 75	“	5 00
Fancy	do.	5 25	“	5 50
Southern	per bbl.	4 75	“	5 00
Richmond City Mills	do.	5 75	“	6 00
Rye	do.	3 50	“	3 62
HAMS, Smoked	per lb.	5	“	10
Pickled	do.	4	“	7
HAY	per 100 lbs.	55	“	65
HIDES, Dry Southern	per lb.	9	“	11
HEMP, Russia, clean	per ton.	180 00	“	185 00
American, water-rotted	do.	140 00	“	180 00
do dew-rotted	do.	90 00	“	140 00
HOPS	per lb.	7	“	9
HORNS	per 100	1 25	“	5 00
LARD	per lb.	5½	“	7½
LEAD	do.	3½	“	4
Sheet and bar	do.	4	“	4½
MEAL, Corn	per bbl.	2 56	“	2 75
Corn	per hhd.	12 00	“	12 50
MOLASSES, New Orleans	per gal.	30	“	32
MUSTARD, American	per lb.	16	“	31
OATS, Northern	per bush.	35	“	38
Southern	do.	30	“	33
OIL, Linseed, American	per gal.	80	“	85
Castor	do.	85	“	90
Lard	do.	60	“	65
OIL CAKE	per 100 lbs.	1 00	“	— —
PEAS, Field.	per bush.	1 25	“	— —
PITCH	per bbl.	1 12½	“	1 37
PLASTER OF PARIS	per ton.	2 00	“	2 25
Ground, in bbls.	per cwt.	50	“	— —
PORK, Mess	per bbl.	8 75	“	10 00
Prime	do.	7 00	“	8 00
RICE	per 100 lbs.	2 37	“	3 00
ROSIN	per bbl.	60	“	85
RYE	per bush.	68	“	70
SALT	per sack	1 35	“	1 50
SHOULDERS, Smoked	per lb.	4	“	6
Pickled	do.	3	“	4
SPIRITS TURPENTINE, Southern	per gal.	32	“	34
SUGAR, New Orleans	per lb.	5	“	8
SUMAC, American	per ton	25 00	“	27 50
TALLOW	per lb.	6	“	7½
TAR	per bbl.	1 25	“	1 50
TIMOTHY SEED	per 7 bush.	13 00	“	15 00
TOBACCO	per lb.	3	“	6½
TURPENTINE	per bbl.	2 12	“	2 50
WHEAT, Western	per bush.	1 00	“	1 07
Southern	do.	90	“	1 00
WHISKEY, American	per gal.	23	“	25
WOOL, Saxony	per lb.	35	“	50
Merino	do.	35	“	40
Half-blood	do.	25	“	30
Common	3do.	20	“	25

New York Cattle Market—February 19.

At market, 1050 Beef Cattle, 165 Cows and Calves, and 600 Sheep.

PRICES.—*Beef Cattle*—We quote to correspond with last week, viz. $4.50 *a* $5, to $5.50, *a* $6, with a few extra at $6.25 *a* $6.50. 250 unsold.

Cows and Calves.—There were 140 sold at $15 *a* $26 each.

Sheep and Lambs.—The market was cleared at $1.75 *a* $3.50 each, according to quality.

Hay.—A good supply of loose at 62½ *a* 75 cents per 100 lbs.

—

REMARKS.—*Ashes* are dull of sale. *Cotton*, notwithstanding the late rise in England, and unprecedentedly large sales, has declined ½ of a cent per lb., since the arrival of the Hibernia. The reason of this is, that our market is still higher than that of Europe, and shippers have now made up their minds that the article must go forward. Export from the United States since 1st September last, 392,058 bales; same time last year, 892,136; same time year before, 574,168. *Flour* and *Meal* are held firm, but little doing. *Grain* of all kinds in fair request. *Hay* is dull. *Hemp* is more firm, with an upward tendency, since the late speculations in Manilla. *Molasses* has a downward look. *Naval Stores*, moderate sales. *Beef* and *Pork*, move slowly. *Lard* is more brisk. *Rice*, *Seeds*, *Sugar*, *Tallow*, and *Tobacco*, small transactions at present. *Wool* continues on the rise, and is in good demand.

Money is as plenty as ever again, and good bills are discounted at 3½ to 4 per cent., and it can be had on bond and mortgage in the city at 5 to 6 per cent.; out of the city, in the state, 7 per cent. is readily paid; but very few of our capitalists seem willing to lend at that. Money from this city, *out of the state*, can not be had at any price, so distrustful are our capitalists of foreign laws and securities.

Stocks are slightly on the advance again.

Business generally is opening brisk this spring, and all kinds of merchandise are on the rise.

Real Estate is getting more and more in demand, and rents, especially for good business locations, greatly advanced.

The weather is very mild for the season, and the winter has been much as we anticipated, page 267 of our last vol. We think we could give a pretty shrewd guess as to what the present spring will be, but we do not care to further risk our prophetic reputation. Everything on the whole appears extremely promising, and we anticipate a long and prosperous career for the country.

HOVEY'S HORTICULTURAL MAGAZINE.

We have recently been appointed agents for this periodical, justly considered the most valuable of its kind in the United States. Any person subscribing through us will be promptly served, and we invite all interested in this subject to call and examine the work.

For any of the above works, or periodicals, or books of any kind, address SAXTON & MILES, 205 Broadway.

Price $3 a year.

POUDRETTE

Of the very best quality for sale. Three barrels for $5, or ten barrels for $15—delivered free of cartage by the New-York Poudrette Company, 23 Chambers street, New York. Orders by mail, with the cash, will be promptly attended to, and with the same care as though the purchaser was present, if addressed as above to

Dec. 1, 1843.—3t. D. K. MINOR, Agent.

DURHAM BULL AND SOUTH-DOWN SHEEP.

For sale, a Durham Bull descended from Whitaker's stock on both sides, and whose pedigree is in the late volume of Coate's Herd-Book. Also, three very superior young South-Down bucks, bred from one of the best flocks in this country.

Enquire post-paid of the Editor of this paper.

Feb. 22, 1844.

CHARLES STARR, Jr.,

MENDHAM, MORRIS COUNTY, NEW JERSEY,

Is prepared to execute all orders for thorough-bred Berkshire Pigs, from the imported boar Hagbourn, and a superior Boar of Windsor-castle family, and fifteen choice sows, lately procured from A. B. Allen, of Buffalo, New York.

Pigs from this superior stock, from 2 to 3 months old, will be delivered, well caged, on shipboard, at New York, for $25 to $30 per pair. Feed furnished, when desired, at $3 per barrel.

Persons desiring either pigs or full-grown animals, can be supplied with all the advantages of Mr. Allen's stock at Buffalo, without incurring the risk and cost of canal transportation—the advertiser's residence being but half a day's journey from New York.

Woburn pigs of a superior quality also for sale, caged and delivered as above, for $25 per pair.

BUSINESS AGENCY.

The Subscriber will attend promptly to the execution of all orders for the purchase of stock, seeds, agricultural implements, or merchandise of any kind; also sales and purchases of lands, payment of taxes, &c., &c. He has been more or less engaged in mercantile pursuits in this city for ten years, and has an extensive acquaintance with moneyed men, and a thorough knowledge of business in general. Cash or produce must invariably be in hand, before orders for purchases can be executed.

A. B. ALLEN.

205 Broadway, New York.

MATCHED & SINGLE HORSES FOR SALE.

The subscriber has placed in his care several very superior match horses fresh from the country, for sale. They are from 5 to 7 years old; 15½ to 16½ hands high; well bred and broke; showy, fast, and enduring.

Also, single horses for the harness or saddle, some of which are very fast, and will trot inside of three minutes easily.

A lady's saddle-horse, racks and gallops, and is very gentle and easy on the bit. A. B. ALLEN, 205 Broadway.

AGRICULTURAL WORKS,

For sale by SAXTON & MILES, 205 Broadway, New York.

The American Race Turf Register, Sportsman's Herald, and General Stud Book. By P. N. Edgar. Price $2.

Liebig's Agricultural and Animal Chemistry. Price 50 cts.

Liebig's Familiar Letters on Chemistry. Price 12½ cts.

Loudon's Encyclopædia of Agriculture, English. Price $10.

Loudon's Encyclopædia of Gardening. Price $10.

Bridgeman's Young Gardener's Assistant, new edition, much enlarged. Price $2.

The Farmer's Mine; being the most complete work on Manures ever published. Price 75 cts.

The Vegetable Kingdom, or Hand-Book of Plants. Price $1.

Youatt on the Horse; a new edition. Price $2.

The Complete Farmer, and Rural Economist, by Thomas G. Fessenden. Price 75 cts.

The New American Orchardist, by Wm. Kenrick. Price 87½ cts.

The Honey Bee, its Natural History, &c., with 35 engravings. Price 31 cts.

Bees, Pigeons, Rabbits, and the Canary Bird, familiarly described. Price 50 cts.

The American Poultry Book; being a practical treatise on the management of Domestic Poultry. Price 35 cts.

A Treatise on Sheep, with the best means for their general management, improvement, &c.; by A. Blacklock. Price 50 cts.

The Theory of Horticulture; or an attempt to explain the principal operations of Gardening upon physiological principles; by John Lindley. Price $1.25.

Gardening for Ladies, and Companion to the Flower Garden, by Mrs. Loudon. Price $1,50.

American Husbandry. Price $1.

The Farmer's Instructor; consisting of Essays, practical directions, and hints for the management of the Farm and the Garden. By J. Buel, 2 vols. Price $1.

A Muck Manual for Farmers; by Samuel L. Dana. Price 50 cts.

Chemistry Applied to Agriculture; by M. Le Comte Chaptal. Price 50 cts.

The American Gardener; by William Cobbett. Price 75 cts.

A Treatise on the Vine; embracing its History, and a complete dissertation on the culture and management of Vine Yards; by Wm. R. Prince. Price $1,50.

The Farmer's Encyclopædia, and Dictionary of Rural Affairs; by Cuthbert W. Johnson. Adapted to the United States by Gouverneur Emerson. Price $1.

Cattle; their Breeds, Management, and Diseases. Price $2.

POLAND FOWLS.

A few of these beautiful fowls can be had at $2 per pair. They are very choice of their kind and well bred. Apply post-paid.

CHARLES STARR, Jr.
Mendham, Morris Co., N. J.

FARM FOR SALE.

A small farm of 25 acres, pleasantly situated in Passaic county, New Jersey, on the turnpike from Newark to Paterson. It is 3 miles from Paterson, 4 from Bloomfield, and 8 from Newark. The soil is good, and about 10 acres seeded down with timothy and clover; 4 acres thrifty young wood; a well-built and substantial stone house on it, near which is a never-failing spring of the purest water running through the grounds; a good apple-orchard, and abundance of small fruit; also, about 60,000 Morus Multicaulis trees, which have stood the climate the last 6 years. This farm is well situated for raising fruits and vegetables for the New York market; being 14 miles from the Hoboken Ferry, and easy of access by both the Newark and Paterson Railroads. For particulars inquire of the Editor of this paper.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 miles, without the State.

ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume I. and II. of THE AMERICAN AGRICULTURIST, with tables of contents complete, for sale at $1,00 each; elegantly bound in cloth, $1,25. These are handsome, tasteful books, and make very desirable premiums for distribution with Agricultural Societies, and should also find place in all our District School Libraries. They constitute the best and most complete treatise on American farming, stock-breeding, and horticulture, extant. When several copies are ordered, a liberal discount will be made.

☞ To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster.

Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway. New York.

WARREN'S IMPROVED HORSE POWERS AND THRESHING MACHINES.

The subscribers continue to manufacture and vend these celebrated machines, with increased success and satisfaction. They will also manufacture a superior Four Horse Power and Thresher on the same principle this season, to sell together for only $100. The price of the Two Horse Power and Thresher together, is only $75. The Two Horse Power alone, $50. The Four Horse Power will be proportionable. Machines deliverable in this city for cash.

Besides our Beater Threshing Machine, we are making a superior Spike Thresher, adapted to be used with any power. This we shall sell at the same price. It has been tested and proved to be excellent and safe.

L. BOSTWICK & CO.,
2t. 272½ Pearl st., New York.

FARMS AND REAL ESTATE FOR SALE.

Several very fine farms in different parts of the United States can be had upon the most reasonable terms. Also, beautiful country seats in this vicinity, at very cheap rates, and real estate in the city. A. B. ALLEN, 205 Broadway.

CONTENTS OF MARCH NUMBER.

EDITORIAL.

Page.
Ten Thousand Subscribers, - - - - - - - 65
Diseases of Sheep,
Benefits of Salt as Manure, - - - - - - 66
Culture of Hops, - - - - - - - - - - - 67
Cocus on Orange Trees,
Subsoil Plowing, - - - - - - - 69
Marl,
Culture of Asparagus, - - - - - - - 70
Harrowing Grain,
Lime as Manure,
New York Farmers' Club, - - - - - - 71
Miscellaneous,
Multicole Rye,
Foreign Agricultural News, - - - - - - - 93
Editor's Table,
To Correspondents, - - - - - 94
Review of the Market, - - - - - - - - - 95

ORIGINAL CORRESPONDENCE.

The Peach-Tree, S. S., - - - - - - - - - 72
Good Effects of Plaster, A Traveller, - - - - - - 75
Shepherd Dogs, T. C. Peters,
Free Martins Breeders, Joseph Cope, - 76
Topping Cotton, M. W. Philips, - - - - - - - 77
Jottings in England, - - - - - - - - - - 78
Culture of Cranberries, Sullivan Bates,
Scarcity of Swine and Sheep, S. W., - - - - 79
The Curculio, - - - - - - - - - - - - 80
Superior Dutch Cheese, An Orange County Lady, - - 83
Farm Horses, R. L. Allen, - - - - - - - - 84
Great Weight of Berkshires, Munson Beach,
Annual Meeting of the N. Y. State Agricultural Society, 87
Northern Calendar for March, - - - - - - - 89
Southern do. do. - - - - - - - - 90
Paular Merinos, Examiner, No. 2, - - - - - 91

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. III. **NEW YORK, APRIL, 1844.** **NO. IV.**

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway

DOWNING'S HIGHLAND NURSERIES.

These celebrated nurseries were founded about the year 1803, by the late Mr. Downing, and at his demise was inherited by his sons, Messrs. C., and A. J. Downing, the present owners and occupants, who were bred to their business, and have literally grown up among their own plants, and shrubs, and trees. It comprises about 30 acres, and is beautifully situated on the right bank of the Hudson, just north of Newburg, on a natural terrace gently sloping to within a short distance of the water's edge. The soil, generally, is a strong loam, varying, occasionally, to gravel and sand, and, as well as the fine exposure, is extremely well adapted to the purpose for which it is occupied. We have had great pleasure in repeatedly visiting these superior nurseries, but in our description of them must be brief, confining ourselves to those things mostly which we have not spoken of elsewhere.

The residence of Mr. A. J. Downing is first approached, and is a handsome Gothic villa in the Tudor style, surrounded by well-kept and very tastefully-arranged grounds; the lawn, the flowers, the shrubbery, and trees, combining ornament with utility.

Mr. Downing says he can not recommend the introduction into this country of English evergreen shrubs, such as the common hollies, Portugal laurels, bays, &c., &c.; north of Philadelphia our climate, like that of Germany, being too cold for them. But for all the fruits of temperate climates, the gooseberry perhaps excepted, our climate is much superior to that of England; consequently, many varieties of pears, cherries, peaches, &c., which even on a wall there are somewhat doubtful in arriving at maturity, are exceedingly good under our sunnier skies, and in our dry soils as open standards, and requiring little care. As an example, the Bartlett pear, which in England is frequently watery, and is ranked in the last edition of the London Catalogue as second rate, he has found one of the finest fruits here. This shows that we must not take the English writers as infallible guides for even so small a matter as the flavor of a well known pear. The belle de choisey cherry he has also proved a valuable sort, the fruit being exceedingly luscious. He also pointed out to us a new seedling plum, called Downing's emerald drop, and another called Roe's autumn gage, both valuable varieties, which should find their place in every garden.

The ornamental trees embrace a great variety, and among these we found the Kentucky coffee-tree, with its double pinnate leaves of large size, and handsome panicles of white flowers; the sea-buckthorn, (*hippophæ,*) with its pale silver leaves; the New Castle, and Washington thorn, which make superior hedges; the western varieties of the horse chestnut, trees little known among us, and deserving universal attention; Madeira-nut trees, from nuts grown in the nursery; superb specimens of the magnolia conspicua; the buffalo berry, standing in pairs, and sparkling with its rich clusters of scarlet fruit; the elm of the southern states, (*ulmus alata,*) of very rapid growth, the branches of which are winged with cork somewhat like the cork-oak; and a beautiful evergreen hedge, making a perfect screen at all seasons, 18 feet high, of the American arbor vitæ, (*thuya occidentalis,*) which is indigenous to the neighborhood, and superior to any other in the country, forming naturally a handsome cone-like tree, clothed from the ground upward, and resembling at a little distance an oriental cypress.

View from Mr. Downing's.—(Fig. 20.)

The view from these gardens of the river and surrounding country is grand, varied, and beautiful to an eminent degree. We give a rough sketch of it, standing in the piazza of Mr. Downing's villa; but neither pen nor pencil can describe the sublimity of the Beacon hills, with their frowning precipices, rising abruptly from the opposite bank of the Hudson to a height of 1,500 feet—the wild ranges of the Highlands, with West Point below—the beautiful picturesque country dotted with villas above, and the various sail craft dancing along the sparkling waters.

Mr. Downing is well known as the author of Designs for Cottage Residences, and a treatise on Landscape Gardening and Rural Architecture; two most excellent works, which have had a large sale, and been the means of greatly improving the taste of our people in these matters. He has another work now in press, the Fruits and Fruit-trees of America, which we trust will soon be out. We think it will be one of the most valuable publications ever issued on this subject.

The residence of Mr. Charles Downing is about half a mile above, and near the river; it is a very neat and tasteful one, and here are grown all the *wholesale* sorts of fruit-trees. They are kept in the best manner, and everything so classed and arranged as to prevent mistakes in taking up for sales. Mr. C. Downing showed us a superior kind of rhubarb, which is larger even than the celebrated Victoria. It comes forward sooner, and continues longer than any other variety, and is remarkable for its tender, succulent quality. We also saw the Spanish tobacco growing here. It attains a great height, and produces a beautiful flower.

Mr. Downing makes use of considerable marl and muck in his nursery-grounds, and prefers them mixed with stable manure to the latter alone. Muck and marl cost 50 cents per load of 30 bushels, delivered at the nursery. After being dug, the muck is allowed to lie six months in heaps, it is then taken and mixed with stable manure, one part of the former to two of the latter, covering the whole heap over two inches deep with dried muck. After standing six to eight weeks, the heap is turned and then covered again with muck as before. At the end of the same period it is again turned and well mixed. At this time it is about half manure and half muck, and will be fit for use in a month's time after this second turning.

GUANO MANURE.

Since Mr. Teschemacher's valuable discovery, (an account of which appeared page 24 of our January No.,) that corn grown by the application of guano contains 50 per cent. more of phosphates in it than that raised on the same land without guano, and that its product may be doubled on a poor soil by the use of a few dollars' worth of this powerful fertilizer per acre, considerable attention has been excited in regard to it by the farmers of this vicinity, and we have been called upon for further information as to its history and use. This has been obligingly furnished us by Mr. Bartlett of this city, who resided some time in Peru, where the article abounds in the largest quantity, and in its purest state.

Guano is found in strata from 1 foot to 60 feet deep, on most of the headlands and islands all along the Peruvian coast, from five degrees to twenty-five degrees south latitude, a distance of about 1,200 miles, and exists in such unbounded quantities, that it will require ages to transport it away. It is without doubt the pure excrements of sea-fowl, which harbor in this region in such immense flocks as to literally darken the air in their flight. It has a strong pungent smell, making it, frequently, excessively disagreeable to approach within 2 or 3 miles of its deposites. The Spaniards of South America have used it as a manure for more than 300 years, particularly on their crops of maize; and the Peruvian Indians had done the same before them from time immemorial. The corn in Peru is first allowed to get up as high as 12 to 15 inches, and then about half a handful (say 3 ounces) is applied to each hill by scattering it round the stalks, and mixing it up well with the soil. About the same quantity is again used just before the corn commences forming the ear, and as it never rains in Peru, the hills are irrigated within 24 hours after each application of the guano. Land in many parts of Peru would yield little without guano; but with it the products are very abundant. Mr. Bartlett adds, that the corn grown there, is the largest and finest he has ever seen in any country. G. G. Howland, Esq., of this city, applied it to strawberry and melon-vines last year, in his garden at his summer residence at Flushing, with the best effect.

A company has purchased the exclusive right of exportation of guano from the coast of Peru, of the government there, having paid for the same about $1,000,000. They have exported large quantities to England, of which 15 to 20,000 tons still remain in Liverpool alone, unsold. Our last accounts quote it at £9 to £10 per ton. At this price, expenses of transportation, &c., together with the United States duty of 20 per cent., it would come too high here for general use among our farmers. If our government would abolish the duty, and it could be had at a low rate of the Peruvian company, and be brought directly to our own ports, it might be afforded at such a price as we think would ensure its use in considerable quantities on the Atlantic borders. We hope that some of our enterprising shipping merchants will endeavor to accomplish so desirable an object as the cheap importation of it would prove to the country.

Guano varies considerably in analysis, for there are three kinds in Peru. The white is considered the most valuable, as being the freshest and purest. We have seen at least a dozen tables of analysis of it, but quote those only of Bertels and Völckel.

	BERTELS. Parts.	VÖLCKEL. Parts.
Urate of Ammonia	32	90
Oxalate of Ammonia	134	106
Oxalate of Lime	164	70
Phosphate of Ammonia	64	60
Phosphate of Ammonia and Magnesia	42	26
Sulphate of Potash	42	55
Sulphate of Soda	11	38
Muriate of Ammonia	65	42
Phosphate of Lime	100	143
Sand and Clay	—	47
Phosphate of Soda	53	—
Alumina	1	—
Residue (insoluble in acids)	58	—
Waxy and Resinous matters	6	—
Common Salt	1	—
Organic matter, traces of salts of iron and water	—	323
Organic matter, free Ammonia, &c., water	227	—
	1000	1000

Johnstone found one sample to contain 303 parts out of 1,000, of common salt, and another sample 114 parts.

An analysis in Liverpool, furnished us by Mr. Howland, gives

Lythic acid	15 per cent.
Bone dust	30 "
Ammonia	15 "
Organic matter	36½ "
Sundries	3½ "
	100 Parts.

The English periodicals have been teeming with accounts of experiments with guano for the past five years; but as their climate and course of cropping are so entirely different from our own, we do not think it advisable to notice them further than by saying, that when properly applied in an unadulterated state, the results are highly satisfactory, and prove it superior to most other manures, and we have no doubt the same would follow in this country, particularly on poor soils. On rich land, or such as has been highly manured, the application of guano would be of little benefit. It suits alike, grass, grain, root crops, flowers, and shrubs; and owing to its great condensation of fertilizing substances in a small bulk, it is particularly valuable and convenient in the conservatory and garden.

Mr. Bartlett has been so obliging as to send us a bag of guano recently imported, and we shall take pleasure in furnishing any of our friends with a few pounds of it, who may be desirous of making experiments. It is so powerful a manure that it must be used in very moderate quantity, say from 100 to 200 lbs. per acre, otherwise it will kill the crop to which it is applied. We would recommend mixing it under cover from rain in thin layers of earth, and after it had lain a short time, toss over the compost pretty minutely, and then apply it to the crops.

DEATH OF MR. H. D. GROVE.

We learn with deep regret of the death of this estimable man, on the 20th of February, at his residence at Hoosick. Mr. Grove was born in Germany, and we believe, regularly educated as a shepherd among the celebrated fine-woolled flocks of Saxony. We understand that he first came to this country in 1824, when, disgusted with the numerous importations into the United States of spurious Saxon sheep, which raged for several succeeding years, he determined upon obtaining a good flock of the genuine breed. For this purpose he returned to Saxony in 1826, and in June, 1827, arrived in this city with 115 pure Saxon sheep, selected by himself, from the celebrated flock of Machern, and settled first at Shaftsbury, and afterward at Hoosick, with a view of breeding them. In 1828, he received direct from Saxony 80 more sheep of the Electoral breed, which, together with the 115, we believe are the only Saxons to be depended upon ever imported into this country. These Mr. Grove has bred with great care; and they are highly esteemed for their soft, fine, silky fleeces wherever known; and his wool has ever brought a higher price than any other raised in America. Our readers will obtain a good knowledge of the merits of these sheep by reference to Mr. Grove's articles on this subject, contributed for the 1st and 2d Volumes of this paper.

Mr. Grove married in this country, and has left an interesting family to mourn his untimely death. He was a pleasant, intelligent man, full of wit and humor; a thorough practical farmer, and unquestionably the best flock-master in the United States. He is a great loss to the country; and to his family and friends, we tender our sympathies for their sudden and unexpected bereavement.

Seeds for Distribution.—We have received from the Hon. H. L. Ellsworth, Commissioner of Patents at Washington, a package of twenty-three different kinds of seeds, which we have distributed among our friends for experiment. By his persevering attentions to agriculture, Mr. Ellsworth is doing a great good to the nation, and we hope he will be seconded in his praiseworthy efforts by all who have the interest of this important branch of industry at heart.

☞ Office Hours.—Owing to his avocations elsewhere, the editor of this paper will more usually be found at his office from 12 o'clock at noon, till 2 P. M., at which time he will be pleased to see all who may be desirous of favoring him with a call.

New York Farmers' Club.—This club held its regular meetings on the first and second Tuesdays of last month, and were unusually interesting and important. It is frequently asked of us, then why not give a fuller report of them? The reasons are: First, that these, with the accompanying documents, would nearly fill our paper each month, to the exclusion of everything else. Second, they immediately get into the *daily* papers, and are copied over the whole country before we go to press, ours being a *monthly* publication, so that when these reports appear in it, they are rather *stale* news to the public. Third, frequently what is of most importance is promised us by the speaker in a *more condensed* form, or nearly the same matter has previously appeared under some head in our pages; it would, therefore, be unfair to our readers to be continually publishing repetitions. Fourth, we have now constantly on hand so much correspondence, that in order to make room for it, we are monthly obliged to condense and cut down the communications; and when gentlemen take the pains to write us from abroad, and distant parts of the country, we think we are bound to give them the preference in our columns, which we shall always do. It is for this reason we have not yet published the list of premiums of the New York State Agricultural Society, nor any of the proceedings of its Monthly Meetings. All these, however, we shall give next month, and any new and important fact reported in the State Society meetings; also those of the Farmers' Club, and indeed at any other assembly in North America. It must be recollected that our periodical is *general*, and not *local*, in its scope and spirit; that its subscribers extend from Newfoundland to Texas, including several of the West India Islands; and that we are bound to make up such a paper as is *generally* readable. The proceedings of the New York Farmers' Club will be found in the Brother Jonathan of this city; those of the New York State Agricultural Society, in the Albany Argus, and Evening Journal.

Subsoil and other Plows.—We have received from the manufacturers, Messrs. Ruggles, Nourse, & Mason, of Worcester, Mass., samples of their Subsoil and Improved Eagle Plows, and shall be pleased to have our friends call and look at them, and take orders. They are highly finished and complete, and as perfect specimens of the plow kind as we have ever seen. Prices vary from $6 to $16, according to size and fixtures. See advertisement.

Stone-Lime, Oyster-Shell Lime, Plaster of Paris.—For the accommodation of our friends, we have taken the agency for the purchase of these fertilizing materials. We would especially recommend the use of plaster to our southern friends. A single barrel costing $1,25 to $1,50, is ample for an acre.

THE SILK CULTURE.

You kindly asked me to give you a sketch of some late travels undertaken for purposes connected with the silk business. I find that I can not do justice to my notes without making an article too long for your crowded paper. I therefore select two or three things, giving more full statements to the public through other channels.

1. The manufacture of silk in the eastern states has greatly increased within one or two years. In that time, and under the fostering influence of our late tariff, several new factories have been started, and several old ones that were connected with, and prostrated by the mulberry speculation of 1838 and '39, have been revived, and are now going prosperously forward. All these establishments are confined chiefly to sewings, twist, cords, gimps, and other trimmings, and find a ready and profitable sale for their goods. They consume severally from 20 to 200 pounds raw-silk weekly. Their chief dependance is upon foreign stock, although they purchase all the American silk properly reeled they can get, and pay higher for it, because it is better. Beyond doubt there is now worked up weekly in New England, New York, and New Jersey, two or three times the quantity of raw-silk that was consumed one year ago.

2. West of the mountains, the almost entire attention of manufacturers has been turned to *weaving*. I brought home with me some *seventy* different samples of silk goods, from the richest figured velvet, down to the plain pongee. (*a*) These establishments are in Western Pennsylvania, Ohio, Indiana, and Tennessee, and none of them use a pound of foreign stock. On the other hand, the increase of the raw material in that quarter has been such, for the past two or three years, that the interests of the silk business now demand more manufacturing capital, or regular arrangements for sending their surplus raw-silk east. They find a ready and profitable sale for their goods as fast as made. I could not learn that any of these establishments had failed, or had been suspended, though some of them have suffered for the want of more capital. The two leading establishments at the west, are Mr. Rapp's at Economy, Pa., and Mr. Gill's, Mount Pleasant, Jefferson county, Ohio, each employing from 40 to 50 hands. I found Mr. Gill putting up a new building 50 by 20 feet, three stories, to be filled with power-looms for weaving pongees.

3. *Feeding Worms* at the west, for the past year or two, has been generally in *sheds*, *tents*, or other *open* buildings, in a perfectly natural state of the atmosphere. Hundreds of pounds of excellent silk have been made in this way.. The report of our Silk Convention in New York, in October, is full of facts relating to this important point, yet at Economy they have fed for ten to twelve years, and use enclosed buildings and are *always successful*. This year they fed 22 or 23 crops, and made between 500 and 600 lbs. reeled silk of first quality. I went through their buildings, and am satisfied they are no *better* ventilated than hundreds of others, where disease and death have so often reigned triumphant among the worms. The grand secret of their success is that they *clean their worms every day.* (*b*)

Growing silk is rapidly extending at the west, and southwest. In Tennessee the crop of 1840 amounted to 1200 pounds cocoons. This year to 20,000 or 25,000 pounds. Several large establishments for feeding are under way. Mr. J. O'Hara, near Pittsburg, has 6 or 7 acres of trees, and is preparing to stock 20 more in the spring. I spent a very pleasant evening with Mr. George Sanders, at his silk-farm, near Wheeling, Va. This gentleman has been personally connected with this business in France and Italy. He has 8 or 9 acres of trees, and is preparing to stock 50 more, and to carry out the most approved artifical systems of Europe on a large scale. He purchased the place in October.

Mr. S. agrees fully in the opinion so often reiterated by silk-growers, that we have much more to dread from *heat* than from *cold*, especially *hot*, *sultry*, *confined* weather. This is the great danger. He is therefore preparing to guard against it. In his one-story cocoonery, 132 by 35 feet, full of doors, windows, and scuttles, he is putting up *twelve chimneys*, designed chiefly for *flash-fires*, made of brush, straw, leaves, or other light materials. He says that in this way he can *entirely* change the air in the room in a few minutes. The principles certainly are perfectly philosophical. It was stated in the papers of the day, that the heat generated by the great fire in New York was so intense as to cause the wind to come blowing in upon the fire from all points of the compass. I know of no cocoonery in the country built in this way, or with *artificial fans*, or in any way so constructed as effectually to secure the great point here aimed at—changing the air at pleasure. We have all provided means for *warming* the room when cold, but none for this. We have guarded against the *lesser* peril, but have left the *greater* one unprovided for. This, together with carelessness and negligence in feeding and cleaning, fully accounts for all the sad disasters in large feeding-establishments. We trust that our intelligent friend will fully demonstrate the feasibility of his plan. It has been already demonstrated that worms can be fed with entire safety in sheds and tents, and other *open* shelters. Let it be shown that they can be fed in enclosed buildings, and in large establishments, and it will give an impetus to the business which nothing can resist.

J. R. Barbour.

Oxford, Mass., March 7, 1844.

(*a*) When Mr. Barbour passed through this city he exhibited these patterns to us. They are not only very handsome samples for the kind, but are well dyed, and we think heavier, stronger goods, than similar qualities imported from abroad.

(*b*) The temperature of the rooms night and day is also kept very equable. When we visited this establishment in June, '42, the superintendent informed us that the atmosphere did not vary more than 10 degrees throughout the whole feeding season.

PAULAR MERINOS.—No. III.

In my remarks sent you a few days since, I referred your readers to the *sample* of the covering of the Jewett ram, at your office in New York. In so doing, I had in view more particularly that portion of the public who might not find it convenient to go to Vermont to examine the said ram and the rest of Mr. Jewett's flock. To all such as have it in their power, and feel sufficient interest in the subject, to be willing to travel to Vermont for that purpose, that course would, I presume, be still more satisfactory than an examination of the *samples*, though selected and furnished by Mr. Jewett himself.

In the columns of the Albany Cultivator for October, 1842, there appeared, among other communications, a *ram advertisement*, in the shape of a letter to the editors, from the Rev. Royal A. Avery, of Galway, New York.

This Mr. Avery (in speaking of Mr. Jewett's pictured ram) says, among other things, "This buck is one which Mr. Jewett purchased of my brother-in-law, Alfred Hull, of Wallingford, Vermont. He also at the same time purchased of Mr. Hull *one* Paular ewe, whose first lamb after Mr. Jewett bought her, is, I presume, the buck whose likeness you gave us in the March No. of the Cultivator." Mr. Avery also says at the same time, that his "brother-in-law's flock has probably been kept *as* pure as any flock in Vermont." (This, it strikes me, is not saying *very much* for their *purity* of blood.) He then goes on to say, (I quote his own words, which I suppose are a key that unlocks the true object of his letter,) "Mr. Hull keeps pure Paular bucks constantly for sale; has sold hundreds within the last twelve years, from $8 to $10 per head; which speaks volumes in their favor! They are no humbug." He then says that the figure of Mr. Jewett's buck, which appeared in the Cultivator for August, 1842, is almost a perfect likeness of *his own* stock buck. He at last "winds up" by giving us, (as one might say,) "in a nut-shell," the true "*nub*" or kernel, of the whole matter. "I have sold all the bucks I could raise at $10 per head, at one year old, *except a few yearlings now on hand*, which will all be taken before December next. Have sold several this season already."

I give the foregoing quotation from Mr. Avery, not only as an example of modern, or Paular *advertising*, (in which the Rev. Mr. Avery almost equals Mr. Jewett himself,) but more especially do I quote it, as being one of the "cutest" and most adroit specimens that I have ever met with, of *filching*, or what is sometimes called "taking the wind out of another man's sails." Why it absolutely leaves Mr. Jewett *nothing at all!* It takes away from him the *old* buck and *young* buck, the ewe, lamb, and all, and leaves Mr. J. in the predicament of being a mere *pretender* to the Paular glories; and this, too, after all the fuss and flourish he has made with his ram pictures, Cultivator letters, and all that sort of thing, including the collateral aid of his *disinterested* co-worker and friend Mr. Henry S. Randall, and all the other puffs and paraphernalia of the ram trade, which means and appliances have been so effective in getting up, and giving *value* to the Paular speculation. And now, after Mr. Jewett has borne so large a part of the heat and labor of getting up the Paular scheme, and is just ready to pocket the fruits, this smooth and shrewd Rev. Mr. Avery would fain endeavor to get its advantages all away from him. Verily this Yankee divine is "not slow" in *secular* affairs. It would not be easy to find his match, in smooth and keen shrewdness, among the sons of *this* world, not even among those whose vocations are nominally less sacred, and savor daily of bargains and traffic.

But it is really too bad. He does not do unto Mr. Jewett "as he would be done by." But I must leave them to settle that matter between themselves, merely remarking that Mr. J., so far as I have seen or heard, bears all from Mr. Avery (thus far) with a meek and quiet temper, or perchance deems it best and wisest to take things *coolly*, under a belief that, as some one says, "the better part of valor is *discretion*," and in *this* matter he may perhaps be *wise* in thus keeping quiet. Of course he knows best about that.

It appears then, that Mr. Jewett did *not*, himself, *breed* his pictured ram, the reputation and glory of which, according to Mr. Avery's account, belongs in the *first* place, wholly to *his* "brother Hull," of Wallingford, Vermont, and then *secondly*, by a kind of reflected light, enures to Mr. Avery himself, who not only says *his own* flock are of that *very same sort*, being derived solely from his "brother Hull's," but that *his own* "*stock-buck*" is the very image of the *picture* of the beast which Mr. Jewett got published in the Cultivator!!

Thus it would seem, that in my plain remarks on the Jewett ram, I must have "hit (at the very least) *three* birds with one stone." A great shot! was it not? But there is no knowing how and *where* these long shots will take effect, where there are such family combinations and *ram*-ifications, as in this Paular speculation.

So it seems that the Jewett mongrel ram, which I commented on and exposed through your columns, is not only a specimen of the Jewett Paulars, but of Rev. Mr. Avery's flock! and also of Mr. Avery's "brother Hull's" flock! the two very same flocks which Mr. A. "cracks up" so plausibly and at such a strong rate, in his letter that you have just published for him in the Agriculturist, though not without some sensible notes and comments of *your own*. Of course Mr. Avery's sheep, which he calls pure Paulars can not be of any purer or better blood than his brother Hull's flock, from which he derived them. Though not such a "mixed medley" of different sorts and *shades* of blood as have been picked up and brought together by Mr. Jewett, yet I do not believe for a single moment, that Mr. Hull's sheep *are* Paulars, any more than Mr. Jewett's, nor even that they have any just claims to be considered *pure Merino* of any sort. If they *are* of pure blood, it is a fact susceptible of *proof*, and of being proved beyond a reasonable doubt. In the absence of such proof, or of *any* proof, I have very good reasons, (which, should there be occasion, may hereafter appear,) for not placing the slightest reliance on the claims put forth by interested parties, in their behalf, so far as *purity of blood* is concerned. They may very likely be good stout, profitable sheep, yielding pretty heavy fleeces. I have at this time nothing to say about them, except only as regards their unfounded pretensions to purity of blood. And here, let me with all due deference inquire, (just by way of suggestion,) whether the right place for Mr. Avery's letter would not have been in your *advertising* department? I say this in the full belief that the whole thing about Paulars, so far from being of public interest, belongs to, or partakes strongly of, the genus "*humbug;*" a fact of which I believe I can furnish you abundant evidence, (if you need it,) for your own private satisfaction. Though on its face purporting to be a letter from Mr. A. "on fine wool sheep," I take it to be, *in fact*, only a regular *puff* of his own and his "brother Hull's" sheep; and though "cunningly devised," yet plainly and evidently designed by him, (after the most approved model of *many* such things, which have from time to time appeared in the Albany Cultivator,) to *assist in selling their rams*. This is, most unquestionably, the "plain English" of it.

But to return to Mr. Jewett. Well, one thing is certain, it is something for Mr. Jewett to be thus publicly relieved of the *discredit* of *breeding* such a beast as that Hull ram of his; I am sure I should think so, if I had been suspected of such a thing as breeding him. But as *he* did not *raise* "the crittur," and (may be) did not *buy* many of that sort, (for his own sake it is devoutly to be *hoped* he did not,) his flock may not be so bad after all, as would naturally be supposed, judging from this coarse and vulgar mongrel ram. If Mr. Jewett was a friend of mine, I would advise him by all means to shoot the ram, or cut his throat, (no matter which,) sooner than *use* him in his flock, any further than he may unfortunately have done already. Indeed I should not like to have any breeding ewes that I valued even *look* at that ram through the fence, for fear that the mere *seeing* him might affect their imaginations so much as to "mark" their offspring with some of his peculiar beauties and excellences, of either *fleece* or countenance.

By the way, I am told that Messrs. Avery and Hull affect to consider Mr. Jewett as imposing on the public, in this matter of saying and advertising as he *has* done, in the Cultivator and elsewhere, that he has for sale and can furnish full blood Paular rams. They are evidently jealous of Mr. J., and seem to consider him as "stealing *their* thunder" in his use of the Paular *name*. I hear that Mr. Avery does not hesitate to say openly, that Mr. Jewett bought of his brother Hull only two or three of their genuine, full blood (spurious?) Paulars. On that *small* capital, they claim that he has presumed to assume and use the magical name of PAULAR, for his *whole* flock, and thus, on the strength of this *very small* "branch from *their* flock of *Simon Pures*," to set himself up extensively in the Paular ram trade, and in that way humbug the public; and that they "would like to see him *exposed*." Now is not that excellent? In my judgment it is really *rich*. Truly when some folks, (that is, *speculators*,) fall out, honest men stand some chance to come by their rights. Now this is just exactly what I have been all along *expecting*. I thought it more than probable that some of these Paular ram speculators and humbuggers "would turn state's evidence" and blow up the whole thing. Here I think we have it, or at least the beginning of it. I have all along considered it a speculation, a mere job.

I wonder if some one who knows would not be willing to inform us *how many* of the genuine full blood Wallingford (or Hull and Avery) Paulars Mr. Jewett *did* actually buy, as a *stock* with which to "set himself up" in the Paular ram business? If it was really but *a few*, say not more than two or three sheep, (as the Rev. Mr. Avery would insinuate,) just as a sprinkling or leaven of the pure and royal blood, with which to *Paularise* (if I may be permitted to coin such a word) or inoculate with the *name* at least, if not with the *blood*, the rest of his large flock, composed of plebeian or chance sheep, selected and bought from the flocks of surrounding farmers, mere "*pick-ups*," and of no certain blood; I say, if this was all, (though I do not of course know what Mr. Jewett would be able to say to all this,) yet I am free to suggest that he (Mr. Jewett) could not possibly do a better thing for his own interest, and for the *reputation* of his flock, than to come out at once like a man, and *own* how *few* he had of them. The *fewer* such sheep, the *better*, I should say. It is surely the wisest and best thing he could now do, and I commend this view of the subject to his most earnest and serious consideration. Depend upon it, Mr. Jewett, if you have, (as I do not doubt is the case,) in the flock you have selected and got together, some good, profitable sheep among them, you can not do a wiser or better thing than to repudiate and cut clear of all connexion with the full blood Wallingford or spurious Paulars. I do not doubt that you have other and *better* materials, out of which to *make* Paulars, than anything you got from Mr. Avery's "brother Hull;" and as to the *name* of Paular, if you have any notion for a *selling* or fancy name, why you can yourself *baptize* them into the Paular family, just as well as Messrs. Hull and Avery could do, albeit you do not happen to be a *clergyman*, as the *latter* claims to be. *Lay* baptism, in such matters, will do just as well as *clerical*. But if you take my advice, you will let Mr Hull, and his brother-in-law, the Rev. Mr. Avery, have and enjoy the reputation and the sole benefit of that Paular ram humbug. I really believe that the thing properly belongs to *them*, and that they *are* (as they *claim* to be) entitled to its fruits. By all means, let them have it. You shall hear from me again, before long, on the subject of Paulars, &c.

EXAMINER.

New York, Nov. 25th, 1843.

NOTE.—We hope all who have any desire to reply to Examiner, will have the patience to wait till he gets through with his numbers; they can then do it briefly and in one lump, and thus save us a diffuse controversy.—ED.

ORIGINAL CORRESPONDENCE.

VIRGINIA LANDS.

The interest you have taken in imparting information to persons settling in Virginia, especially those who are leaving Dutchess and other counties of this state, has induced me to communicate such information as I possess toward advancing the objects of the emigrants. It is with pain, however, that I learn of this desertion of the Empire state, which contains within its limits all the capabilities of the seaboard, and may, under a judicious method of cultivation, compete with the favored west. There is a two-fold interest awakened in the breast of Americans in consequence of our political constitution, which I fear will for a long time impoverish one state to enrich another. We are of two nations, natives of a state, but citizens of a union of states; how far the place of our nativity may have claims upon us beyond those of the federal union, must depend upon individual peculiarities; but so long as it can be shown that a precipitate desertion of our fatherland is not called for as a means of improving our finances, it ought to be maturely considered before being entered upon. I have no hesitation in stating, that the New Yorker who leaves this state to better himself in Virginia, will be disappointed in time. But I will not withhold such information as I possess, although it is neither extensive nor valuable.

The richest lands of eastern Virginia are situated along the river courses, and in the tide-water districts to a certain extent. There is, however, an exception to the fertility of the tide-water lands on the south side of the James river, near its embouchure, where there exists large level tracts of sand, which yield indeed fine sweet potatoes, but only when well manured. The sandy deposites stretch to the seacoast, with occasional extensive tracts of marsh-lands and swamps, which are sources of deadly malaria, but become of eminent fertility when properly drained. Upon the north, between the James river and the Rappahanock, lie extensive plains well furnished with *marl*, and although impoverished, still susceptible of great improvement.

But it is upon the great rivers, on their alluvial deposites, that the rich soil of eastern Virginia is found. This does not, however, extend throughout their whole extent. The James river above Richmond to Lynchburg, presents a valley varying from a quarter to two miles in width, containing lands as rich as any in the world. Here immense crops of the finest American wheat, and much tobacco is produced from year to year without apparent exhaustion. But upon the hill-sides which form the flanks of the valley, the case is widely different. The hills rise usually abruptly, or with an inclination of from 10 to 20 degrees. They are therefore very subject to washing, and their cultivation is difficult. Above Richmond they are formed of transition and primary rocks; and although fertile before exhaustion, are not sufficiently improveable for the purposes of our primeval farmers, who look to their crops and forget the soil. The alluvial portions of the district are, however, worth from $50 to $100 per acre, are sought after with avidity, and sell in large tracts.

The secondary formation of eastern Virginia lies between Richmond and Petersburg, and in a band having an inconsiderable width, but which stretches through the state, running to the shores of the Potomac. It presents us with some of the most sterile and unimproveable land of the whole country.

The lands lying west of this strip, and forming nearly half of the counties of Virginia east of the Blue Ridge, are of the transition formation, and contain red clays which are very rich when newly cleared, and improveable for many years. These tracts also present us with white pipe-clays of very little value. The native farmers, however, think much more of the flats upon creeks, and small streams which intersperse the state in every portion of this geological formation. They risk all the chances of freshets, and place the major part of their crops upon them—and not without reason, for however shallow the hill-side soil may be, that of the bottoms is frequently deep and mellow.

In the south, the Roanoke, Stanton, and Dan rivers present the traveller with alluvial bottoms frequently of great extent and fertility. The lands here, which in some tracts rival the formation on James river, are to be obtained at a much more reasonable price—they are indeed further from markets—more subject to inundations, and unprovided with a canal as in that case; but the Roanoke and Stanton are sufficiently deep for small steamboats, and the enterprise of our northern people would introduce them, under which circumstances they would be almost as valuable as James river lands. The upper portions of the Dan are at present but sparsely populated; but the Virginians themselves have turned their attention to that portion of their country. Emigrants would do well to visit that section of the state, especially the county of Pittsylvania.

H. D. X.

FRUIT-TREES.

Amidst the great agricultural improvements of the age, the subject of Horticulture has not been entirely overlooked; but a new impulse seems to have been given to this branch of rural industry. Yet I doubt whether the great mass of the community are aware of the pleasure, nay, I will say the profit to be derived from a good fruit garden, or an orchard of the finest varieties of fruit. Indeed, I question whether one fourth part of our population have ever tasted of a choice pear or cherry. There is as much difference between a good pear and a poor one, or a good cherry and a poor one, as there is between a crab apple and a Spitsenberg or a pippin.

I have recently noticed an article going the round in the newspapers, stating that there is a stately pear-tree near Kinderhook, that has produced the past season five barrels of pears. This no doubt is a valuable tree, and yet I am quite sure that there are hundreds of trees in our country much more productive. As facts are stubborn things, I therefore am inclined to give a brief statement of the produce of some fruit-trees near me; and I am the more inclined to do this, not only from the fact that the public at large are quite eager to learn about fine fruit, but also to redeem a promise made some time since, that I would occasionally write an article for the pages of the American Agriculturist.

There are three fruit-trees all growing within forty rods of my house, the produce of which the past season has been as follows: An apple-tree from which we gathered over six barrels of very fine Rhode Island greenings. A tree of the orange-pear which produced the past season ten barrels of pears. These pears have frequently sold for $2 per bushel—$40 worth have been sold from this tree in a single season. A tree of the autumn pear, (so called,) from which was gathered the past season over twelve barrels of fruit. These pears generally sell for one dollar the bushel. Perhaps some facts connected with the history of the last-mentioned tree may not be uninteresting.

Some thirty years ago, my father employed one of those travelling itinerant grafting-men to set a few apple grafts for him; when the job was about done, he solicited my father to permit him to set a few pear scions. This was objected to in consequence of the pear being so long coming into bearing; my father making the remark that he never should live to see them bear fruit. But finally, saying, that perhaps some of his children might possibly live to see them bear, he consented to have a few set. They were engrafted on the common thorn cut down below the surface of the ground. They grew vigorously, and the old gentleman lived to enjoy the fruits of his labors. The year previous to his death, (1835,) the tree above mentioned produced 33 bushels of pears. He sold them at $1 per bushel. A tree of the orange-pear engrafted at the same time, has generally yielded about one half as much fruit as the above.

I do not mention the above as anything very extraordinary; for no doubt there are many other trees in our country much more productive than these. Indeed, there are several in this neighborhood nearly as valuable. In several instances I have gathered eighteen bushels of the Rhode Island greenings from a single tree. Nearly every one is fully convinced of the pleasure and profit to be derived from cultivating choice fruit, and yet there is a natural disposition to defer it. The thought "I never shall live to see them bear," and the possibility that others may enjoy the fruits of their labors, deters many from doing anything that may benefit posterity. And yet what richer legacy can a parent leave to his child? And what is there that would be more likely to attach a child to the old homestead, than a well-cultivated fruit garden? An acre or two planted with the most choice and select kinds of fruit, in ten or twenty years becomes worth a little fortune.

BENJAMIN HODGE.

Buffalo Nursery, December, 1843.

We regret that in the foregoing communication our friend Col. Hodge did not give us a description of his extensive nursery, which is one of the finest in western New York. He has long been engaged in the business of tree culture in all its varieties; and his ground now comprises more than 100,000 of all kinds of fruit and ornamental trees, besides an extensive collection of shrubs and flowering plants. The extensive demand from the country west of Buffalo, which has sprung up in consequence of the rapid settlement of the great lake regions of Michigan and its adjacent territories, have made that point a great resort for the supply of trees for western farmers. No country in the world perhaps yields finer apples, pears, plums, cherries, and quinces, and peaches, as well as the smaller fruits, than that bordering the great western lakes; and we look forward to no distant day, when their waters, and those of the Erie canal, will teem with the luxuriant products of their orchards, destined for our city, and a foreign market.

We are happy to know that public attention is more directed to this subject than formerly; and while good fruit is so easily and cheaply propagated, no resident on even one acre of ground should rest without planting and cultivating a liberal supply of choice fruit. We are promised in our next, from an experienced nurseryman, a list of the most valuable and popular fruits, with a short description of each for publication.

THE STRAWBERRY.

I HAVE seen a communication signed S. S., in the 2d Volume of your periodical, and as no one has yet ventured a reply, I lay before you the present article, in the confident hope that it will satisfy the doubts of your able and ingenious correspondent. The error which he appears to have fallen into, arises from the rash spirit of generalization, which too often distinguishes writers who have a theory to sustain. This is an age of facts, and one of a practical character; and as I propose to try his communication by this rule, you will be better able to judge who is right. He says: "The strawberry, in its sexual parts, has one property corresponding with the almost entire vegetable kingdom; that is to say, to secure fructification, it has the stamens and pistils (the male and female parts) on the same plant." This I deny. The first authority that I shall offer is to be found in M'Intosh's Practical Gardener, page 368, and is as follows:—

"The Hautboy generally thrives best in light soils, and can scarcely be overdunged, as it is not so likely to be thrown into a superfluity of leaves by manure as some of the others. There are various sorts of this species, all of them esteemed for their fine flavor; one variety has the parts of fructification so perfect, that it bears plentifully, being capable of fecundating itself; while some other varieties are so imperfect, that they contain the *male* parts in one flower, and the *female* in another. Still the latter varieties are reckoned the finest flavored fruit. Keen, a successful cultivator of this fruit, observes, that great care is necessary to be taken in selecting young plants of these sorts for making out new plantations; that there be a proper proportion of male plants to the female, not having too many of the former, as they bear no fruit, and are more prone to run into leaves and runners than the others. He considers that the proportion ought to be one male to ten females, and states his reasons for making such a choice. Having been formerly in the habit of selecting female plants alone for his beds, he failed in being able to procure crops; but in 1809, suspecting his error, he obtained some male blossoms, which he placed in a bottle on the bed of female hautboys. In a few days he perceived the fruit near the bottle to swell. On this observation, he procured more male blossoms, and in like manner placed them in bottles in different parts of the beds, removing the bottles to fresh places every morning, and by this means obtained a moderate crop where he had no fruit the preceding year." See Loudon, M'Mahon, and others.

Lindley is the only writer who appears to favor your correspondent's theory, and he admits that there are fruitful and sterile plants, yet what is very extraordinary, he does not give the botanical character of these plants.

I have examined Keen's seedling with great care, upon one set of flowers the stamens and anthers were absent, and the pistils only existed; on the other the stamens and anthers were present without the pistils, and this will be found to be invariably the case with this kind of hautboys; and I will venture to assert, that S. S. may put virgin soil, guano manure, or Bommer's, or any other that he pleases, and he will not produce a perfect strawberry; and for this simple reason, that he can not violate a law of nature, which requires two sexes to produce a species. Besides all this, the male plants are not less distinguishable in their flowers than in their runners; for every practical gardener knows that the runners are always reddish in the male, and greenish in the female.

Again, S. S. says: "Now to call any perfect strawberry plant a *male* or *female plant*, is to assert a fact at variance, the writer believes, though no botanist, with the habits of all other plants; that is to say, there are no intermarriages of plants changing the sexual character of their progeny, and passing them from the description of those like the strawberry, Icosandria polygynia, (males and females on the same plant,) to those like the hemp and palms with male and female on different plants."

Now, if I understand S. S., his argument is, that no monœcius can produce a diœcius plant. Here S. S. is again at fault, for the grape, (*vitis*,) which is pentandria monogynia, does produce a diœcius grape, called the Scuppernong: and the common sweet-scented grape, (*vitis riparia*, or odoratissima of some authors.) This I think knocks his argument into a cocked hat.

The writer again says, that he never saw a wild *he* strawberry. If he will look less after the *shes* and more after the *hes*, he will be gratified; for in this part of the world the *hes* have established a complete monkery, so that not one female is to be found. It is evident then, that a monœcius plant can produce a diœcius, and if it can on the grape, there is no reason that the same result should not be shown on the strawberry. It may be called a sport of nature, but it is one of those means she takes to produce varieties so important to our comfort and welfare.

S. S. has made some important remarks upon the cultivation of fruit well worthy of consideration; and as he appears to be a lover of horticulture, I have deemed it right to direct his attention to an error which has escaped his usual sagacity.

T. R. R.

Long Island, near Huntington, Jan., 1844.

EXPORTATION OF FRUIT.

In my opinion, the importance of growing fruit as an article of export, has been most generally overlooked in this country. It is true the fruit-dealers of Boston have been shipping apples and cranberries to Europe for many years, and of late, apples have been shipped to Calcutta. There is no doubt that quinces and the finest quality of winter pears could be shipped to some parts of Europe with the same success as our other fruits. The business being new in this section of the country, I propose saying something relating to the export of fruit for the benefit of new beginners.

All fruits sent abroad should be of the *very first quality*. The Boston dealers ship their celebrated Baldwin apples. The most valuable variety in this vicinity is the Newtown pippins, as they keep sound and retain their flavor late in the spring, when most other varieties are gone. A distinguished horticulturist of New York, ships his apples to London in the following manner: After being carefully picked, and placed by hand in baskets, they are carried by men and put in an open barn for the purpose of sweating 15 or 20 days. Some are then packed in barrels with perfectly dry sand, some in buckwheat, and others are put in barrels without anything with them. (*a*) They are then taken on a sled, or in the box of a wagon hung with spiral springs, to a boat on the North river, and thence to the vessel which takes them to London. In all these trans-shipments the barrels are never rolled, jolted, or jarred, so that the apples escape bruising, and the consequence is they arrive in London in far better order than they are in general when brought to the New York market.

These precautions in shipping apples agree perfectly with some facts I obtained from Mr. Serrell of the American Institute, formerly engaged as a managing ship-owner in London, connected with the fruit-trade. In drawing charter parties for a vessel to take fresh fruits from Spain and Portugal to London, a special clause is inserted that the boxes of oranges shall be hoisted into the vessel by the takle being attached to each; and that the boxes also are to be stowed on their bottoms, and never on their sides or ends. On landing in London, the same care is taken in hoisting them out of the vessel. The boxes are then placed on the heads of men known as fruit-porters, and by them carried to the warehouse, where they are examined and assorted, and then sent out in the same manner to the places of consumption. The same precautions are used in taking the oranges from the garden to the shore, from the shore to the lighter, and from the lighter to the vessel.

The Boston fruit-dealers, when shipping cranberries to New Orleans or Europe, assort them by letting them run over a platform slightly inclined. Only the perfect fruit runs over the whole length of the platform, the rotten and bruised fruit lodge going down, and are thrown away. The choice fruit is then put in tight barrels, and, when headed up, filled with water. The fruit will arrive at its destination in perfect order, and has frequently been sold in England and France at $20 per barrel.

B. G. Boswell.

Philadelphia, February, 1844.

(*a*) This last is unquestionably the best method of shipping apples. The barrels should have a few holes bored in each head with an inch and a half-augur, and ought always to be shipped on deck. See Vol. II., page 193. In addition to sand and bran, we have heard of apples being shipped in charcoal, sawdust, cider, and a variety of other substances; but so far as our experience and information extend, they never arrive in so good order as when packed entirely by themselves.

ENGLISH METHOD OF FATTENING CATTLE.

I have been greatly interested in reading your "Tour in England," as contained in the first two volumes of the American Agriculturist. Did your remarks and general detail of English farming operations require confirmation, I, as a practical English farmer, should be exceedingly willing to subscribe to their general correctness. But such, I feel, your readers can not deem necessary, inasmuch as the clear and lucid style in which your interesting Tour is written, as also the absence of any of those tales, surpassing credit, with which modern travellers love to interlard their works, bears sufficiently evident upon itself the impress of reality.

You cleverly remark in one portion of your Tour, that "you are not *particularly* ambitious of becoming the Trollope of English manners," and I congratulate you most heartily in withstanding the temptation of passing severe, or even *just* strictures upon peculiarities, which a traveller will more or less find to belong to every people. However, such indulgence among travel-writers is of course a matter of taste, and allow me to add, I think yours to be good in refraining from such indulgence.

In reading your Tour, it struck me that there was one subject which might with benefit to farmers in this country, be more fully enlarged upon. I allude to the English method of fattening cattle. I do not wish to be understood as believing that the entire system would be applicable to American grazing; but I do believe, after close observation, that some hints may be gathered from our method, which graziers in this country might turn to account; and before making any remarks upon the matter, I will give in as concise a form as possible, the plan I have pursued in England upon my own farm.

My stock is of the Durham breed. It has been my object, when possible, to have my cows calve some time in January or February, and I would never rear any produce for fattening that fell later than the last of February; my reason is, that they would not be ready to make a start with the grass in May, and consequently be a year behind the earlier ones in coming to perfection.

I wean my calves when a fortnight old, (I allude to those intended for grazing,) feeding them on milk, oats, bran, carrots, and, in fact, something of everything that the farm produces, and which they can be made to eat. At this period I consider the calves require the greatest care and most constant attention; and keeping them clean and warm are not the least important requisites. I give them a little food at a time, but feed them six or seven times a day. Almost the only ailment I have found my calves subject to at this age, is scouring; this, if not checked by times, will weaken the animal greatly, and not unlikely cause death. The remedy which I apply is at once simple and efficacious, viz., boiled rice with a small quantity of powdered ginger; administered, if the calves will not drink it, from a bottle. As soon as there is grass and the weather is warm, which is generally with us about the 1st of May, my calves are turned out in the morning and taken up again at night—well littered, with wheat-straw, (barley-straw engenders lice,) and fed with a little corn, &c.* As the weather gets warmer, I allow them to remain out all night, always feeding them night and morning with oil-cake or oats. This treatment continues through the summer. In the October following, they are taken up and yarded for the winter; running in an open yard, with a shed which they use at pleasure, behind the bullocks which are tied up and fattening. In this yard they have the odds and ends of vegetables, which the bullocks will not eat, some rough hay, and 3 lbs. of oil-cake each per day; or sometimes, in its place, a bait of bean-meal.

On or about the 1st of May in the following year, they are turned out to grass for the summer; except in the hottest weather, when I have them driven into the yard during the heat of the day to protect them from the flies, and supplied with a few green tares or a little clover; but they seldom eat much of either during the excessive heat.

In October they are again taken into the yard, but this time to be tied up to fatten, as we now call them bullocks, and that year's calves take their places in the open yard. I commence feeding them with turneps, hay, and 3 lbs. of oil-cake each per day—generally Dutch cake, which is inferior to our English cake. When the turneps are all gone, I go on upon beet root, and increase the quantity of cake to two quarts per day. I next change the cake from Dutch to English; and I may here remark incidentally, that American oil-cake is the best for grazing purposes, and on this account used very extensively by many of our principal breeders.

---

* Note.—When the term "corn" is used, I mean beans, peas, oats, or barley.

The principle upon which I graze is simply this, constantly to change, and always *improve*, when I do change, the feed of my bullocks. Thus when my bullocks are being what we term "topped up," (the last stage of fattening,) they are feeding on the best hay or clover I have, beet-root, oil-cake, and perhaps bean-meal. In February and March they are ripe or ready for the butcher—they being just two years old. Their weight will vary from 750 to 850 lbs.

I will now, as nearly as I am able, lay before you the expense which I consider these beasts have been to me during these two years.

	£.	*s.*	*d.*
1st Year.—I calculate the prime cost of the calf at - - - -	1	0	0
Keep from January to May -		10	0
Do. from May to October - -	1	0	0
2d Year.—Keep from Oct. to May	2	2	0
Do. from May to October - -	2	10	0
Cost of fattening - - - -	12	0	0
	£19	2*s.*	0*d.*

Supposing my fat beef to be worth 7*s.* 6*d.* per stone of 14 lbs., that at 800 lbs. would be £21 7*s.* 6*d.*, thus leaving me £2 5*s.* 6*d.* profit besides the manure, the value of which it would be difficult to estimate. Suffice it to say, that if we obtain the manure *only*, as our profit, we consider ourselves amply repaid for our outlay. In making inquiries of butchers and graziers during my hitherto somewhat limited travels in this country, I have been surprised to learn that artificial food is seldom or ever used to force your beef to market, and that consequently, it is four to five years old before fit for the butcher.* When expressing my astonishment at this, I have invariably been met with the answer: "The price of meat will not warrant our going to much expense in fattening our beasts in this country." Now, sir, I would respectfully submit, through your columns, to the farmers of this country, whether it would not be preferable to obtain *two returns for their money instead of one;* or to be content with small profits every *two* years, instead of larger ones every *five;* besides improving to an inconceivable extent, the quality of their farmyard manure.

The above calculation is of course not at all applicable to grazing in America; I have merely inserted it to show the relative bearings of expense and returns attendant on forcing beef in England. Another advantage belonging to fattening early, I consider to be lessening the risk and chances of loss or accidents to the beast. It is fair to suppose that five years will be more prolific in casualities than two.

I have thus laid before your readers a subject which I believe worthy their attention and consideration; and I feel convinced they will receive my observations and hints in the same spirit which influenced me in writing them—the pure spirit of good feeling, and a sincere desire to see the agriculture of the world prosper and advance.

DENDY SHARWOOD.

New York, Jan. 10*th*, 1844.

CHARCOAL AND ITS USES.

FIVE years since, I received from Italy several hundred mulberry trees, comprising the rarest and most tender varieties—packed in pulverised charcoal dust, in tight boxes. On their arrival, I found the roots as well as the buds had grown to the length of six inches. The growth was of course perfectly white, and when exposed to the atmosphere wilted immediately—the trees were in the most perfect order.

This led me to try various experiments with charcoal dust; such as striking soft wooded geraniums, of one summer's growth, wax plants, grape cuttings, and various other plants, with complete success. I likewise use it in growing vegetables, planting grape-vines, trees, shrubs, &c.—in considerable quantities on strawberry beds, potato fields, grass and wheat lands, sown broadcast. Last February I cut a young grape-vine into a single eye, in the open garden, and freely manured it with charcoal dust. Before the 20th of August it had grown 32½ feet. My gardener soaked a kernel of sweet corn in *spirits of ammonia*, double *F. F.*, for the space of 20 minutes, and planted it in a pot filled with pure pulverised charcoal dust, which he then thrust in a well-prepared hot bed; in 24 hours it had grown one inch; other grains he soaked 25 minutes, and killed the vital principle of the kernel. So strong were the fumes of the ammonia, that it destroyed a bed of cucumbers in 20 minutes, placed in a saucer in the midst of the vines under glass. The object in putting it there was to kill insects, which it did most effectually in three minutes; and had it been then removed, the probability is the plants would have been improved by the gas—there were cucumbers on them at the time six inches long.

Charcoal as a manure will be found invaluable: it is pure and incorruptible, absorbs from the atmosphere 90 volumes of ammoniacal gas, 55 of sulphuretted hydrogen, and 35 of carbonic acid gas. By uniting with oxygen, it forms carbonic acid gas, and constitutes about 42 per cent. in sugar, 41 per cent. in gum, 43 per cent. in wheat starch, 52 in oak wood, 51 in beach wood, 46 in pure vinegar, 36 in tartaric acid, and 41 in citric acid; as carbonic acid gas, it is found in all cultivated soils, in all waters, and in the atmosphere. It is absorbed by every plant that grows, the carbonic acid gas being composed of oxygen and hydrogen; it will therefore be readily conceded that being necessary to plants, in all stages of their growth, there can not be applied to them a substance more requisite. Charcoal from pine wood is the best for agricultural purposes, on account of its fine texture, which enables it to absorb moisture, together with the other gases before enumerated, more rapidly, and may be easily incorporated with the soil, where it protects plants, not only from decay, but worms. It insures them without cessation, all the elements most required, and essentially necessary to their healthy growth, and gives them a beautiful green appearance, and luxuriance, not obtained by the use of any other substance as a manure.

---

* NOTE.—The writer might have said with greater truth, five to six years old, which tells still more strongly against our slow, wasteful, half-starving method of rearing and fatting cattle.—ED.

All farmers are familiar with the fact that coal-beds, where pits have been formed for the purpose of preparing charcoal, produce a most luxuriant growth of vegetable substances or weeds. It has been generally supposed by those who have witnessed the fact, that it was caused by the ashes remaining on the bed, which is not so. It is owing to the hydrogen, oxygen, nitrogen, azote, &c. absorbed by the carbon. If the coal were even deprived of all the qualities specified, its black color alone would make it valuable, if only to attract the sun's rays, and thereby warm the soil.

Robert L. Pell.

TANNING ON THE PLANTATION.

One of my neighbors last year induced me to subscribe to your work, with which I am much pleased, as I find it embraces information of utility to the inhabitants of every part of the country, and well merits its title, "The American Agriculturist."

I do not know whether you have ever treated on the process of tanning,[*] in fact it is not an agricultural business; but in the way I am about to mention it, one that I consider as very necessary to cotton planters, and perhaps to some others. By tanning small quantities of leather for our own use, not only a saving of money may be effected, but our plow and cart gears, saddles, bridles, &c., would always be kept in good order, to the great comfort of working animals, and profit of the planter. We daily see old leather, half rotten, and pieces of rope used instead of good, sound, and soft leather, to the great annoyance of the animal and loss to the owner, in back-bands, head-stalls, &c. I am no advocate to the doctrine of every man living as much within himself as possible, by raising everything at home that he wants, but on the contrary, to the old adage of "not having too many irons in the fire," for, the fewer branches of business a man follows, the better will they be done; but in the present instance we furnish ourselves with a very essential article for carrying on our agricultural pursuits, with little loss of time, and comparatively no expense.

I would advise planters to have nothing to do with old, dry hides, which require soaking to soften, and *breaking*, as the tanners call it; but to use green hides just taken from the animal. These are to be put into lime and water of considerable strength, in order to raise the grain, swell the skin, and open the pores, to prepare them for receiving the tan, and allow the hair to be easily taken off with the back of a drawing-knife. They must be examined twice a day, and as soon as the hair will come out easily, let the operation be done; they must then be washed out in clear water and divested of all the lime in them, and immediately put in tan. A vat, barrel, or tub will answer for tanning; this and your bark for tanning must be ready beforehand. Oak-bark is generally used for tanning, and when it is used it must be well pounded or ground, that the water may saturate it properly, and imbibe the tannin matter to be communicated to the hide. But I write principally for my neighbors, and to them I say that we have plenty of palmetto, the roots of which are as good for tanning as anything else, and they are merely to be dug up with grubbing hoes, cut in pieces, and put into water with your hides; they are so porous as not to require pounding or grinding, and at the same time that we are procuring these we are divesting our ground of a noxious root. In placing your hides have some of this at the bottom of your vessel, and place some between every fold, so that no one part of the skin shall come in contact with another. If your hide is large it is best to cut it in strips of two to four pieces, so as to handle and be able to put it in tan more conveniently. While in the process of tanning, it is necessary to take it out now and then, in order to wring or allow the water to drip out, that it may receive stronger ooze, and to see that every part is receiving the ooze equally. Take every opportunity of this kind to cut and scrape off as much of the flesh as you can, that will be found adhering to the hide. If half a day out of tan every two or three weeks, it will be benefited instead of receiving injury by it; but it must be kept in the shade, as the sun would greatly injure it. Take out your tanning matter frequently, and supply fresh; it is better to do this than to crowd your leather too much. When thoroughly tanned, which you may know by cutting a small piece and letting it dry, take it out, and before quite dry, grease it with whale (tanners') oil, or neats-foot oil, and holding a part of it in your hands, beat it well on a block, changing the place of holding every now and then, so that every part may receive a proper pounding, and that this pounding may stretch it in every direction; then have a strong table or bench, and on this double and roll it and stretch it in every direction, turning first one side and then the other out, so as to make it perfectly soft and pliant. If on drying you find it not worked enough, grease and go on again. This is for harness or shoe leather; sole leather does not require this greasing and working, but simply to be hung up in the shade to dry. Every time your leather is taken out of tan, you ought to pull and cut off as much of the flesh as you can—especially just before greasing and working it as above mentioned. Strong ashes will answer in place of lime. Do not crowd your leather too much, and let your ooze be always strong.

Currying is a distinct branch, and requires an experienced hand; but after cutting out your girths, bridle reins, &c., almost any carpenter or man knowing how to use a drawing-knife, may, with a smooth board placed under it, or the wooden horse he uses for drawing shingles, making axe-helves, &c., shave it down sufficiently. It ought never to be too much curried down, as the strength of the leather is between the flesh and the grain. All leather ought to be greased frequently to keep it pliant, and render it durable. White tanned leather was much in vogue here some years ago, that is, leather tanned with salt and alum. The process is easy and quick; but the leather is not durable. Leather receives little or no tan during freezing weather, and consequently it is not necessary to examine it so often. In hot weather it must be strictly attended to. Temperate weather is best for tanning.

---

[*] Note.—We gave a capital article on this subject by Mr. Affleck, Vol. II., page 276, which Mr. Winfree had not seen when he favored us with this communication; but we are not the less happy to hear from him, and gladly insert this, for we like to see the south becoming more and more independent by developing its own great natural resources.—Ed.

PHILIP WINFREE.

Louisiana, Jan. 2d, 1844.

TREE DAHLIA.

IN December, 1839, we first saw a tree dahlia flourishing in the conservatory of the *Jardin des Plantes* of Paris. A tree dahlia is a novelty in horticulture, and we will state what little is yet known of its history.

It is originally from Mexico, as well as its family, and was introduced into England three or four years ago. From England it passed into Belgium, where it was established in the conservatory of M. Mawy, the celebrated horticultor of Liege. Thence it was brought to the Jardin des Plantes, in the spring of 1839. It was a small plant, and was set in the ground in the conservatory by M. Neumann. Eight months afterward it had grown eight or nine feet high, and showed its first flowers. The root is large and tuberculous, and seemed to have no disposition to produce other bunches of roots like the other dahlias. This plant has one stem, branching a little at the top—it has become *woody* at the bottom, smaller at the base than in the middle of its height. The upper part of the tree remains green and hollow, furnished with large warts. The part of the stem nearest to the ground puts out many single roots, they are stiff, and some of them strike into the ground; such as do not reach the ground dry up. The leaves are much larger than those of the other dahlia, some of them being as much as three feet long. They are set opposite to each other, are pennated, and their *petioles*, leaf-stalks, are sheathed around the stem, forming, of this plant, a species altogether different from the herbaceous species.

The flowers are *axillaires;* on the top of the plant, are largely pedunculate and diverging—are of a clear lilac color—about three inches broad—in the form of an anemony; that is to say, the exterior petals are, in number, from five to eight, are long, flat, quite narrow and numerous in the centre of the flower, but shorter and irregular in form.

They would have been considered very beautiful fifty years ago; but in our day, the herbaceous dahlia is so wonderfully beautiful and varied, that this tree dahlia will probably find admission only into those great botanical establishments where all the beauties of the vegetable world are concentrated; and this plant being only in part woody, while the rest is herbaceous, it must depend for its safety upon artificial protection.

TO THE NEW YORK FARMERS' CLUB,

GENTLEMEN—I have translated the above article on the dahlia from the *Revue Horticole* of Paris, and take pleasure in communicating it to you.

H. MEIGS,
Sec. of the N. Y. Farmers' Club.

Feb. 17, 1844.

FARM OF MR. FRANKLIN MORGAN.

I WROTE you a hasty sketch as I was making a flying tour through Massachusetts last autumn, upon the subject of wornout lands, which you published in your February No.; but fearing my observations in that article may be considered of too general a character, I hasten to "define my position" with more particularity.

A farm of 270 acres, lying within half a mile of the railroad depot, in the town of Palmer, Hamden county, Massachusetts, has remained in the same family down to the fifth generation, or until October, 1839, when it was sold. There had never been a barn upon the farm until within the last 14 years, as I was informed. The manure had been suffered to collect around the stack-yards, and alongside the fences where the cattle had sheltered themselves from year to year, and dropped it. The refuse of the hay, corn-stalks, and straw, was also left upon the ground until it had accumulated to the depth of six feet, more or less, according to the situation of the ground, and its adaptation to retain the materials thus dropped, and to collect leaves as they were blown from the forest, which in a lapse of time of nearly a century, amounted to considerable in certain positions. My informant did not speak much in favor of the buildings or fences at the time of sale. The crop of hay was estimated at 25 tons, and this not of a very good quality. The stock pastured that year was six cows, six yearlings, one yoke of oxen, and two horses, and these not kept in a thriving condition. The road leading to the church, village, stores, mills, &c., &c., was circuitous, nearly two miles to get to a point that can now be reached in less than half a mile. We will now reverse the picture from "no book-farming" to one of an opposite character.

Mr. Franklin Morgan purchased this farm at the time above stated, October, 1839, and commenced improvements on "book-farming" principles. In 1840 he mowed the brush upon the whole farm, (except such parts as he intended to grub,) in the months of June and September. This he did for three years in succession, whenever he could find a young sprout starting up. He has sowed plaster upon all the pasture ground in the month of May in each year, at the rate of 100 lbs. per acre, and he now thinks it will not be necessary to sow any more for some years, as the feed is very luxuriant, and I found it as thick as a mat at the time I visited it, which was in November last. There were then 66 head of cattle grazing upon it, all in fine condition, although the weather was cold, and there had been some snow. The pasture is a rough, stony piece of land, of a loamy soil, mostly a side hill descending to the northeast. There were 35 acres of loamy land, free from stone. This he cleared of everything, and smoothed the surface, harrowing it each way with a heavy harrow, and very sharp teeth, sowing on herd's-grass, clover, and red-top, seeding very heavily, covering the whole with a compost to the depth of two inches or more, then harrowing again, and then rolling with a heavy roller, and subsequently sowing with plaster after having bushed it well to fill up all the little crevices, so as to leave the ground perfectly level.

Adjoining this, he had a meadow of about 15 acres covered with bogs, moss, running briars, some alder and other brush, and trash of various kinds, some part of which was covered with water. In the first place, he ditched and completely drained it, then took off the whole top below the surface, piling some of it like cocks of hay, and carting some, and the greatest part, into the barnyard. The brushy part and bogs, he let stand until well dried, and then burned, and scattered the ashes over the ground. That which was thrown out of the ditches was carted away, and other materials mixed with it to make compost for other land. This compost is made up of the following materials: Meadow-muck, deposites around old stack bottoms, by the sides of fences, in hollows, &c., as described in the former part of this article; from stable manure, ashes, and lime. All these ingredients were well incorporated and fermented before being used. Some of the remaining heaps which have not been disposed of as above-described, are surrounded by a temporary rail fence, within which are placed a few hogs. Land-pikes, and alligator breeds, will answer very well for this purpose, a few of which are still to be found in Massachusetts. Holes are made in the heaps with an iron bar, and filled with corn, the hogs rooting them over and over until sufficiently fine to spread upon the surrounding ground, when the hogs are removed to another enclosure, thus making the saying of Dr. Franklin's servant no longer true of his porkship, that " he no work, he eat, he drink, he walk about, he sleep, he lib like a gemman."

The land thus prepared, it is harrowed with a heavy harrow, then sowed in September with herd's-grass and red-top, and in the month of March following, upon a light snow, with clover, seeding very heavily with all. In the month of May it is well rolled, and a top-dressing of yard or stable manure spread over the whole. It is said by good judges that some of this meadow has yielded three tons of hay per acre the past year, and at the time I was upon it in November, there was, on an average, more than a ton of the second crop per acre, which was being fed off by fat cattle. It is the opinion of the owner, as well as other good judges, that 200 tons of the best of hay has been cut upon the farm this year. There are other lands cultivated in grass besides the two pieces above-mentioned, say about 90 acres in all. In addition, there have been raised upon the farm 220 bushels of corn, 1,400 bushels of potatoes, 350 bushels of oats, and 56 bushels of round turneps: all the land, whether for hay, pasture, or crops, is plastered more or less.

The buildings have been erected with a strict regard to economy; the barns and sheds conveniently arranged; the dimensions as follows: One barn is 123 feet by 40, with floor through the whole length, and a cellar beneath 90 feet by 40. One shed 55 by 20; one 36 by 19; and another 48 by 20 feet. One other barn 28 by 34; one shed attached 25 by 20, and another 35 by 20. All the barns were filled. The hay on the outer lots was stacked, there not being barn-room sufficient to hold near all the hay cut upon the farm. Several small cottages are erected for laborers, who are furnished with all the necessaries of life, and never have occasion to go from home for anything, the owner always anticipating their wants, and the whole being conducted strictly upon temperance principles, as I was informed. Everything raised is consumed upon the farm, besides which, considerable hay and manure are purchased for the purpose of still farther enriching the land.

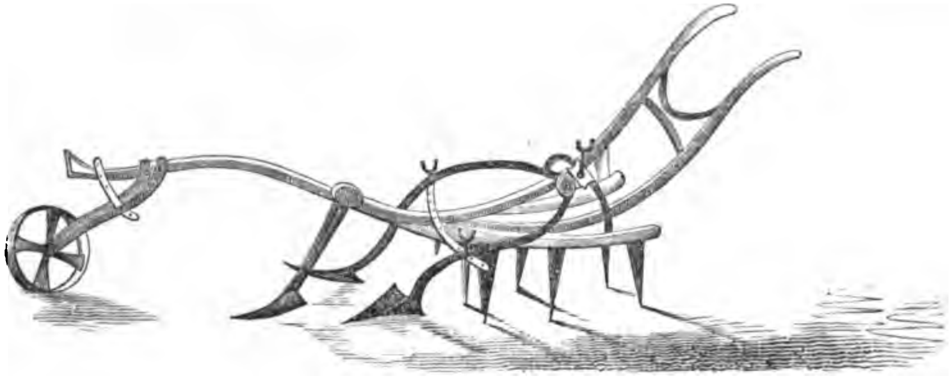
This farm was awarded the first premium for the best cultivated farm by the Massachusetts State Agricultaral Society in 1842, it having appeared to the committee that greater improvements had been made in a given time, than on any other farm in the state.

A TRAVELLER.

AGRICULTURAL IMPLEMENTS FOR THE SOUTH.

We are familiar with the following implement, having frequently seen it at work in England; and we give the sketch of it which Mr. Nelson has so obligingly sent us, as a matter both of utility and curiosity. We have seen instruments constructed on nearly the same principle in this country, and in fact had one in use for several years on our own farm. This was designed to unite the merits of the cultivator and harrow, and can be very easily, plainly, and cheaply made, by any one accustomed to the use of tools. Where it is designed to cut up the weeds, stir the earth, and leave it level between the rows, it answers admirably. But in addition to this, the planters wish to throw the soil between the rows of corn, cotton, and sugar, toward them, and for this purpose they must have at least the two last teeth of each arm made like a plow-share with mould-boards; they can then add three more teeth like those of the harrow, or ordinary cultivator. We have recently had such an instrument made in this city for a friend at the south, and if it works well, we shall give a complete description of it hereafter. It weighs 86 lbs., and cost $10.50. We have the Implements of Agriculture, by Allen Ransome, and several other English works recently issued. If Mr. Nelson has seen implements in England, the principles of

WILKIE'S HORSE, HOE, AND DRILL HARROW.—(FIG. 21.)



which may be applied here either directly or with modifications, we shall be happy to hear from him. Our orders for them are constantly increasing, and we wish to be immediately apprized of all new inventions or improvements in this line. This is a very important subject to the farmer and planter.

Pittsburg, Feb. 17th, 1844.

UPON reading the letter of Mr. John C. Potts, at page 365, Vol. II., of the American Agriculturist, and seeing the cut of the three-share plow, (which he mentioned,) in your last February No., it occurred to me that an implement lately used in Scotland with *universal approbation,* would be just the thing for the south. It is known by the name of Wilkie's Horse Hoe and Drill Harrow. This implement, a rough sketch of which I send you, is guided and drawn like a plow between the rows, thoroughly scuffling or clearing the land from its numerous weeds. The depth to which its prongs and feathered feet go in the soil, is regulated by elevating or depressing the wheel in front. It likewise answers as a rake by dragging along with it the heaps of destroyed weeds, so that a hand can basket them off with ease; it also keeps the soil in fine order. I have seen the same implement fitted with light moveable mould-boards on each side, which answered exceedingly well where necessary to throw the mould round the roots of the growing plants, as in the case of potatoes, &c. It performs its work in a superior manner, and at less than half the cost of plowing. There are two or three minor improvements which I could adapt if I were making the implement; but in its present state it is the most effective thing of the kind with which I am acquainted, and I have seen many. If you think the implement worth notice in the Agriculturist, I would give you any further particulars you might require, or you might send a tracing of it to your southern friends. If you think this communication worth your notice, I could send you descriptions of other improved implements, which are considered (in England at least) superior to anything of the same kind in use.

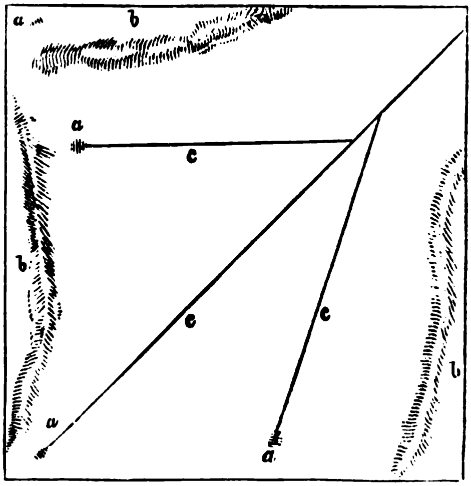
JOHN NELSON.

DRAINING LAND.

IT is now a well-established fact, that land must be dry before any permanent improvements can be made. Lime and manure are almost a total loss when used on lands that are saturated with water a great part of the year. In some cases this arises from springs, in others it arises from a heavy retentive subsoil, and the land laid down in such a form that the water can not drain off. Underdraining is the only proper remedy for lands wet by springs. The cheapest and most durable manner of doing this, is the knowledge that farmers want; and the best way to impart this knowledge is to state facts arising from experience.

In the fall of 1834 I drained six acres of land; after grubbing off the bushes which had held possession of it from time immemorial, I run three drains 2 feet wide, and 20 inches deep, over the land, all uniting at one corner of the field.

SIX-ACRE FIELD.—(FIG. 22.)



b, b, b, represent slight rises of ground 6 to 8 feet high, the rest of the six-acre field being nearly level, slightly declining to where the ditches meet in one; *a, a, a,* springs which before the ditches were made kept the field continually wet; *c*, *c*, *c*, covered ditches 2 feet wide and 20 inches deep.

These ditches were made of common field stones, from the size of a man's head to quite small ones. A channel was cut for the water to pass by, placing stones of the proper size on each side of the bottom of the drain, and one to cover them, filled in with small stones to the height of 4 to 6 inches, levelled off, and a sod then placed grass-side down over the stone; then filled up with earth. Two of these drains are good at this time, one of them I have taken up this fall to be relaid. Ground mice are great enemies to drains; in dry weather they make nests in them, which stops the channel, and causes the water to break up through the earth.

The expense of draining the six acres alluded to, was not over $50. It was done by the laborers of the farm, and the stone was pitched from the adjoining field. The ground had never been cropped, for the most of it was a perfect quagmire for nine months in the year, overgrown with bogs and hassocks, and its value for farming purposes not over $10 an acre, before being drained.

The first crop I raised was in 1835. It was corn manured in the hill with street manure; the produce was small, owing to an unfavorable season. The next spring I sowed with oats, which made a good crop—the straw grew nearly as heavy as it could stand. The produce was 63½ bushels per acre. On two thirds of the oat-stubble I spread about 15 wagon-loads of fermented manure to the acre; on the other third at the rate of 60 loads of swamp earth per acre, and sowed 10 bushels of wheat. The wheat was as large as it could well grow, and although the rust injured it, and caused the berry to shrink, it averaged 34 bushels per acre. Wheat was then worth $2 a bushel. I was therefore well paid for my outlay in draining. The land was then laid down to grass, and has cut very heavy burdens of the best quality of hay for several years, and I now value it at $100 per acre, and it is well worth that sum for farming purposes.

In addition to these six acres, I have drained about fourteen more, with nearly similar results. All my drains heretofore, with the exception of a short one made this fall, have been made of stone. In future I shall use wood, (the boughs of red cedar,) the more durable the wood the better. Before describing the manner of making the wood drains, allow me to give cuts of three instruments which I have caused to be made for the purpose by a common blacksmith in the neighborhood.

Drain Scoops.—(Fig. 23.)

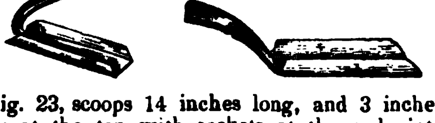


Fig. 23, scoops 14 inches long, and 3 inches wide at the top, with sockets at the ends, into which handles of any convenient length can be inserted.

Drain Spade.—(Fig. 24.)

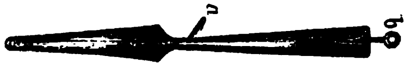


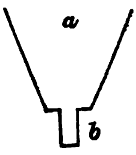
Fig. 24 is a spade with a blade 13 inches long 1¼ inches wide at the end, and 3 inches wide at the top. At *a* is an iron spur 3 inches long, running out of the iron shaft, on which to place the foot to push the spade into the earth. The top of the shaft is made with a socket to insert a wooden handle, from which is extended a small iron piece with a hole in it at *b*, through which a rivet runs into the handle to keep it fast, and from slipping out of the socket.

Drain Fork.—(Fig. 25.)

Fig. 25 is a drain fork with prongs 2½ inches long, and 2 inches apart from each other, with a point to be inserted in a wooden handle about 3½ feet in length.

With these instruments I have had made a short drain, which satisfies me that they are preferable to stone when the quantity of water to be discharged is not large, and I think the mice will not as easily injure them as the stone drains; and they are made in about half the time that a stone drain will require. My ditcher, who has made drains all his life in England, says he has known them to stand there 18 years, when the black thorn and willow was used for filling up.

Ditch.—(Fig. 26.)



A ditch should first be dug with a common spade not less than 12 to 14 inches deep, and about two spits wide, Fig. 26, at *a*; then the narrow spade, Fig. 24, is to be used to make the trench *b*, to receive the wood. This should be 10 to 12 inches deep, and 3 to 4 inches wide. After all the loose earth is hauled out by the scoops, Fig. 23, the boughs are to be cut into proper lengths, so as to lay straight, (say 6 to 9 feet,) and then placed in the trench as close as they will lie, and pressed down with the fork, Fig. 25, even with the bottom of the first ditch. A sod is then placed over the wood with the grass side down, and pressed close with the feet. It is now ready to fill up with dirt. Great care should be taken to do the work well—its durability depends upon this.

When a field requires much draining, it may be done when plowed in lands eight paces wide, by using the narrowed tool at once in the furrows, between the ridges, after a little clearing out, or a double mould-board plow may be used to advantage.

The expense of draining with wood will vary with the different kinds of soil. In England where this kind of draining is practised to a considerable extent, a good hand will receive 2*s*. 6*d*. sterling per day, finding himself. If taken by the job the price varies from 1*s*. to 3*s*. per chain.

The farmer who contemplates draining, had, if possible, better employ an experienced hand, one accustomed to that kind of labor; if he is so fortunate as to procure a faithful man, his work will be better done, answer the ends he has in view, and he will be well rewarded for his outlay of capital.

CORNELIUS BAKER.

Rahway, New Jersey, Jan. 3d, 1844.

We can add our testimony to that of Mr. Baker in favor of this system of brush draining; for seven years ago this month, (April,) we drained a field nearly in the manner that he recommends. The land lay nearly level, and being a stiff clay, retained the surface water so long upon it, as to make it nearly valueless. Our drains draw well to this day, and we think will last full 20 years. Of part of this land, we made a very fine garden, which produces well all sorts of vegetables, fruits, and vines, usually grown.

A FARMER'S EDUCATION.

We bespeak an attentive perusal for the admirable article which follows. It treats upon a subject of vital importance to the republic, and one which, to our disgrace, has hitherto been almost entirely neglected. Other nations are now taking effective measures for the scientific agricultural education of their people, and shall we look on supine and inert? By the introduction of a superior system of agriculture, England calculates *within ten years* of becoming an *exporter* of wheat! We must advance in an equal step with the nations abroad, or we shall soon become, notwithstanding our boasted independence, their mere hewers of wood and drawers of water; for their superior enlightened minds, directing matter, would soon outrival and finally overwhelm us.

Mount Vernon, Jan. 31*st*, 1844.

"*Practical farmers require the simplest and most elementary statements.*" This is an extract from the preface of Productive Farming, a work lately compiled by Joseph A. Smith, with praiseworthy motives, and designed "to present the scientific and technical writings of the principal agricultural writers of the present day, to the industrious farmer in a form less repulsive, because less learned, and consequently more generally intelligible." Such is the avowed object of the work, and mortifying as is the fact, nevertheless, "'tis true, and pity 'tis, 'tis true."

That men, born and educated on this continent, men of mature judgment, and, taken as a class, of greater intelligence than the like class in any other country, and enjoying more political rights than any similar class in the world, should, in literature *solely applicable to their own particular calling*, be thus placed on a footing with *children*, and be compelled to admit the justice of so placing them, indicates most conclusively the existence of error in some part of our social organization requiring a remedy. These reflections have frequently pressed themselves on my mind, and while I must admit the truth of Mr. Smith's assertion, and would most unwillingly impute any other object to him than that avowed in his compilation, I am clearly of opinion that he has not adopted the right method of serving the farmers, and of curing the acknowledged evil.

The scientific works of learned men must not be abridged and *brought down* to the intellect of the industrious farmer; but the intellect of the industrious farmer must be *elevated and brought up* to the easy comprehension of scientific works. A work on agriculture, because containing scientific terms, must not be as *repulsive* to a farmer as a spider, a caterpillar, or other insect, to a delicate lady. I trust Mr. Smith will be fully compensated for his labor by the sale of his work, for he deserves it; but with all due deference to his better judgment, and without disparagement to the work or its author, I maintain that he has mistaken the remedy, and the only one proper to be adopted in this country. Both the *cause* and the *remedy* are clearly pointed out in the first sentence of your article, page 2 of current volume. "*The present system of educating the rural population of the country is not what it ought to be.*" To this point must the public attention be directed—a reformation in the kind of instruction given in the district schools throughout the state is absolutely necessary. Let the primary acquirements and learning received through those schools be of the proper kind, and we shall soon see that the intellect of the "industrious farmer" is as capable of high cultivation and improvement as the noble farms and the most fertile soils of our country. Let them acquire in their childhood what will be serviceable in manhood.

Through the district schools the farmers are furnished with the sure and easy means of correcting this ignorance—now ripened into a proverb, and in doing so, will re-establish the *dignity of their occupation.* In place of inspectors and commissioners of common schools, there is now chosen in each town, a town superintendent, who has the entire control over all the teachers to be employed, and of all the books to be used in those schools. The *farmers* have the choosing of all those town superintendents. Let them bear this in mind. They are the *electors*, and can make their own selection of efficient officers, and let not *politics* or *party feelings* pollute those selections; let them be sanctified by the righteous and single purpose of selecting such men, and such only, as will with cheerfulness and ability attend to those duties. Duties full as responsible and important, when justly appreciated, as those discharged by the governor, chancellor, judges, or other officers administering the various duties of civil government. The youthful mind is committed to their charge. The future usefulness of our young and growing population throughout the country depend on them to be formed and moulded as those superintendents may direct.

A want of proper knowledge on the subject matters of their avocation, is in reality the cause of the seeming want of respectability in a farmer's life. Ignorance seems to have gone hand in hand with the cultivation of the soil. The generality of mankind hold the opinion, that to be a farmer requires little or no knowledge, and frequently, when all other things fail, a farmer's life is taken up as a last resource. Is a youth stupid at his books? What is the remedy? *Why, make a farmer of him.* Who has not heard of this panacea for dullness and stupidity? A youth once destined for a farmer is destined to a life of *ignorance.* Bodily labor is considered as incompatible with all mental acquirements. This is the dark cloud which has overshadowed a *profession of all others the most honorable.* It is this dark cloud which the town superintendents can and must dispel. The light of science must be allowed to dawn upon the farmer's intellect. As the rising sun is justly held the grandest object of the visible world, so another sun, second only to that noble orb, must shine upon and illumine the youthful intellect of those destined to cultivate the soil. This sun must take its rise in our district and common schools, under the guidance and influence of the town superintendents. Who then can deny the importance and responsibility of those duties, and that they should be performed by men duly impressed with such responsibility? The laws and regulations of civil society as they here exist, are in general well adapted to protect the rights and secure all proper enjoyments to the great mass of our population, and a failure in this respect is entirely owing to the people themselves, who, inflamed by party feelings, do not elect the best men to discharge the duties required by the laws. Entrust to a farmer the duties of a sailor, to a sailor the work of a manufacturer, to a lawyer the work of a farmer, to a rogue the duties of a clergyman, and what would be the condition of commerce, manufactures, agriculture, and religion? Apply this rule to the present education of farmers. Neither the *teachers* nor the *books* employed for the purpose are of the right kind. There are not now in existence proper primary or elementary class-books for the instruction of those destined to be farmers.

Go into all or any of those district schools and examine a class in geography or astronomy, and you will find almost every question in the class-book used for the purpose, well and correctly answered, and the boys are in fact good geographers and astronomers. This is all right, and it is knowledge they should have; but ask them to name the bones composing the different parts of the head, body, or foot of a horse, a cow, or any other animal, how would both teacher and scholar stare at you? Neither politeness nor fear could restrain them from laughing at one they would consider as little better than a fool or madman. And why is this? Simply because no such matters are taught or ever mentioned in the school.

What is geography? The anatomy of the earth. What is astronomy? The anatomy of the heavens. These are both taught and well learned; and yet the anatomy of the human body, or of animals, is never thought of. All pertaining to this and the ordinary terms used by men of science when writing on this and other subjects essential to a farmer's education, are never taught nor heard of in the schools. The terms in anatomy, the names and uses of the several bones and muscles; the terms in geology, agricultural chemistry, and mechanical philosophy, &c., can as easily be learned by boys as the various divisions of the earth and heavens, and the names of the different countries and rivers on the globe.

The words promontory, isthmus, meridian, equator, &c., in geography, the words Aries, Pleiades. Ursa Major, &c., in astronomy, are not more easily learned or comprehended by children, than the words vertebra, flexors, pastern, stifle, molars, &c., would be in anatomy; or the words oxygen, hydrogen, nitrates, sulphates, &c., in chemistry, or the terms granite, hornblend, feldspar, quartz, &c., in geology. The New York society for the diffusion of useful knowledge have, I believe, examined and recommended several text-books for the use of the common schools, but none of them as far as I have seen, are of the character I should consider quite as requisite for the elementary education of the young farmer. If proper text-books on those subjects were compiled for the use of district schools, as they have been in geography, history, and astronomy, by question and answer, young people would soon become familiar with the technical words of science, which, being well understood, would then cease to be considered *repulsive.* Scientific words as they are now considered would become words of every-day use. Pedantry would cease to exist, and things would be known and called by their scientific names as readily as they are now by others. I must not here be understood as disparaging a knowledge of either history, geography, arithmetic, or astronomy—far from it. I consider all this knowledge as absolutely necessary; but I believe that with proper text-books, there is *ample* time to acquire a sufficient elementary knowledge of all those. But even were there not, I consider the entire exclusion of the other branches I have named as fundamentally wrong. I would sacrifice some knowledge in astronomy if it were replaced by equal knowledge in geology, chemistry, agriculture, or anatomy—so of history and of geography, and mathematics. Neither would I require young boys to learn by heart whole pages of the speeches of Cicero, Demosthenes, or other great orators, and keep them utterly ignorant of the elements and technical terms of those sciences by which they are to acquire their future support and respectability. I would not educate as great orators and statesmen, boys who in after life are to become practical farmers. It is true the vanity of parents may be gratified when listening to their young Ciceros, Demosthenes, Pitts, Websters, &c., and their ambitious fancy may give such shape and reality to their *future man.* Gazing into futurity, they may, by anticipation, delight on their destined ornament to some of the learned professions. But without disturbing those hallowed and pleasing aspirations of a parent, I would simply say, elevate the farmer's knowledge to be equal to that required in other professions, and all a parent's hope may then be realized in a farmer's son, well learned in his profession.

There is no denying the fact, that to most of the farmers of the present day, words of science are "*repulsive.*" They are not understood by them, and although they have a desire, as occasion permits, to read for pleasure and instruction, it is irksome, and indeed impossible, to turn this pastime into hard and severe study. They can derive no pleasure from reading in ignorance, not comprehending the technical terms of their subject, or in spending most of the time which they can devote to reading, in hunting out the meaning of words. Hence it is, that not only *books* of science, but *men* of science are avoided by the farmers. They receive no pleasure when brought in contact with either. Thus they are induced to avoid them, and thus as a matter of *choice*, not *necessity*, they take a lower rank in society than the *true dignity* of their occupation requires.

I trust enough has been said to demonstrate the true cause of the present situation of farmers, and that they have the remedy in their own hands. I will now point out a practical mode of applying this remedy, which in less than fifteen years, (and this in the life of a community is a short period,) will create a class of industrious farmers, for whom it will not be necessary to abridge the works of scientific writers on agriculture, and to present their works in a form *less repulsive, because less learned, and consequently, more generally intelligible.*

As that which is everybody's business becomes nobody's, I will take the liberty of designating an institution under whose direction the work of reform should be commenced. In making this selection, I do not intend to reflect upon, or underrate the utility of others. I name the *American Institute*, because if its objects are to promote national greatness, it will never have a better opportunity. It is an institution fast growing into importance if properly directed. It is now conducted by men of comparative leisure and much experience. It has received much public patronage, and can not with reason object to incurring the slight expense required for the purposes I mention. Let then the American Institute, through their committee on agriculture, or a committee of the Farmers' Club, or a committee from the New York State Society for the diffusion of useful knowledge, ascertain from the superintendent of common schools, the names of all the town superintendents in the state, and their places of residence. Address a printed communication to each of these, setting forth the object in view, get from them assurances that they will cause to be introduced and used in all their district schools, such text-books on agriculture, geology, chemistry, anatomy of animals, &c., as shall be recommended to them by the Institute, and also the number of such books required in each school, and in the district libraries. Let them also open a correspondence with all the county agricultural societies, &c, to aid in making up a *suitable* reward or premium to be offered for the best text-books.

When this is done, let the same committee advertise for the best elementary text-books on those subjects, to be selected for approval at such time, place, and in such manner, as may be deemed most advisable; stating also the probable number of such approved books that will be required, and the premium or reward to be given, and I am satisfied that the certainty of remuneration to arise from said premium, and from so large, expeditious, and certain a sale of such approved text-books, would command the talents of competent men, and that geology, anatomy, agriculture, and chemistry, adapted to the use of common schools, would occupy the talents of many an Uncle Philip, Peter Parley, Mitchell, Davies, &c.

Let whatever committees may be appointed to examine and approve of those text-books, be men of science in each department, who will carefully and honestly discharge their duty; let no undue influence be brought to bear in procuring recommendations of books; let the town superintendents employ *competent teachers*, (a duty not sufficiently estimated at present,) and let the class-books so recommended and approved of, be thus introduced and used in all our common schools. Such an organized and simultaneous movement in this state must inevitably spread through and be adopted in other states, and as I before said, in ten or fifteen years from this time, the compilation of Joseph A. Smith may be required in other countries, but in this, will be of little use.

Thomas Addis Emmet.

CULTIVATION OF FRUIT.

Soil.—The hard gravelly soil of the eastern states, the sandy soil of New Jersey, the clay soil of Pennsylvania, and the rich alluvial bottoms of the west, all produce an abundance of the different varieties of fruit when proper attention is given to the trees. Mr. Phinney, of Lexington, Massachusetts, has ditched and drained one of his swamps, and has now on it a luxuriant orchard of apples-trees. *The great point is to have a dry soil.* If it is not sufficiently rich, make it so; no man should *expect* to have *fine* crops of anything unless his soil is rich.

Setting out Trees.—If by exposure the roots have become dry, immerse them in water for 20 or 30 hours previous to setting them out. Prepare a compost as follows: Take 3 bushels of rich soil, or 3 bushels of swamp muck would be better, 1 bushel night soil, 1 bushel fine charcoal, (if charcoal is plenty 3 to 4 bushels is to be preferred,) 1 bushel slaked lime, 1 bushel of unleached, or 2 bushels of leached wood ashes, and 1 peck of salt. Mix the above well together.

Dig the holes 3ft. wide, 2 feet deep, keeping the top soil by itself, fill in a portion of the bottom soil until nearly ready for the tree, then fill in half a bushel of the compost and set in the tree, spreading out the roots to their natural position, and fill in the top soil, gently shaking the tree two or three times to settle the soil around the roots. The tree should be set the same depth in the orchard, that it stood in the nursery. Leave the soil a little hollowing about the tree to catch and retain the rain-water. Put around each tree half a peck of fine charcoal, and half a peck of slaked lime. With these precautions, neither peach nor any other fruit-trees will be infested with worms at the roots provided they have suitable after-culture. For many of the above suggestions the writer is indebted to R. L. Pell, Esq., of Pelham, Ulster Co., New York.

Culture of Orchards.—The soil around the trees should be kept loose, either by spading, digging with a mattock, or by plowing. If a crop is put in the orchard, nothing should be planted or sowed within five feet of the trees, as the nourishment taken up by the crop is so much taken from the growth of the trees. After the lime and charcoal has laid around the trees one year, spread it around the trees in a circle of ten feet in diameter. This should be done in the spring, when the soil is cultivated, and a fresh supply of lime and charcoal applied.

When the trees have been set out three or four years, the soil should be enriched with a compost of manure, swamp-muck, and ashes. Early every spring the trunks of the trees should be washed with strong ley, strong soap-suds, or thin soft soap. Apply either of these with a whitewash brush as high as a man can reach. When the trees grow rapidly, their growth will be increased by slitting the outer bark the whole length from the ground up to the limbs. This gives the trees room to expand. As soon as the trees blossom, throw over them lime perfectly slaked—this should be done while the dew is on.

To render Old and Barren Orchards Thrifty and Productive.—Early in the spring plow the entire orchard and enrich with a compost of manure, swamp muck, lime, and chip manure. Scrape off all the old bark with a deck scraper, or a hoe, ground sharp. Apply half a bushel slaked lime, and the same of fine charcoal, around each tree. Apply then soft soap or strong soap-suds on the trunks and limbs as high as a man can reach. While the trees are in full bloom, throw over them a good supply of fine slaked lime.

To Destroy Caterpillars.—As soon as the nests can be seen, procure some pure spirits of ammonia, tie a small piece of sponge to a pole that is long enough to reach the highest nests, fill the sponge with ammonia, and once filling will be sufficient to rub off and destroy from thirty to forty nests.

B. G. Boswell.

Philadelphia, February, 1844.

GEORGIA LANDS AND AGRICULTURE.

I was struck with a communication in a former number of your paper, apprizing your readers that farmers from the middle states were turning their attention to the lands in Virginia. I have often wondered why all the immigration from those states should tend westward. It can not be that such a cold, not to say wild region, is more desirable than our genial clime. I can think of but two causes to deter the immigrant from our sunny clime, and they are imaginary. I understand that northern people suppose we are much exposed to fever and ague. From all I can learn, there is much more of it in the west than the south. Some parts of the southern country, it is true, suffer from diseases engendered by miasma; but others, and the larger portion, (I speak of Georgia,) are as free from them as any section of the Union. Middle and upper Georgia is, I presume, as healthy a region as you will find in the world. The lower part, comprehending the pine land, is nearly a level plain. The growth is almost exclusively long-leaf pine, and, except on the streams, the soil is generally a sandy barren. This region extends from the Atlantic 150 or 200 miles, then comes the middle region, which is undulating, well watered, and timbered with oak, hickory, &c. This section extends from the pine land to the mountains, and is about 100 or 150 miles wide. Then comes the northern or mountain portion of the state, where all the northern fruits and vegetables grow in great perfection.

But to return to the middle region, with which I have to do. This is the great cotton portion, and when new, much sickness was occasioned by killing thousands of acres of heavy timber, in preparing the land for cultivation. That portion of country lying between the Oconee, I may say even the Ocmulgee, and the Savannah rivers, is now called "the old part of Georgia." Much of it, particularly on the Savannah river, was settled soon after the revolution, and some of it, as Wilkes, Columbia, &c., during that period. There is now but little new land cleared, and the consequence is, that fever is hardly ever found except occasionally on the water courses. Many northern people live and die here without ever having had a chill or bilious fever. Consumption, and those diseases occasioned by cold, are almost unknown. I believe my own family is a fair specimen of the health of the country in which I live. I have been housekeeping ten years, have had a family numbering from 20 to 60, and have only had one bilious case during the time, and that was a light case of chills following the Tyler grippe last fall.

I presume the other reason why many of your people are deterred from our country, is on account of the institution of slavery. That may be avoided by owning none—for thousands live in the midst of them without owning one, and I have never heard the first man complain that the black population was the least in his way. But the objection, if such it be, may be obviated by selecting a county where the population is white. By reference to the census, you will perceive that some counties have no more than many counties in New York have of free negroes.

The advantages of Georgia are many and striking. Thousands of stock have lived throughout the winter without feeding. It is a very common occurrence for hogs to run wild, and live for years on the mast to be found in the woods. Now hundreds, nay thousands of bushels of acorns might be gathered on the creeks. Our green crops are kept all winter, without being removed. My cabbages and ruta baga are now standing in my garden, green and growing. Beets need not be removed until you wish them to feed. Potatoes will lie in the ground all winter, and grow off finely in the spring. Most of the northern fruits grow well with us; besides which, we have the fig, and might have many other tropical fruits in great abundance. Only a few of the grapes grow well. The blue grass, I believe if planted in rich land, would do well. It is now green and flourishing in my yard, affording good grazing. The rich, low grounds, which are but little used, will grow it most luxuriantly.

But what will be most interesting to your agricultural readers, is, that we have land in great abundance, and at very low prices. Our planters have had land so plenty, that they have usually found it most convenient to cut down the forest, cultivate the land, until too much exhausted to make heavy crops, and then desert it for a new county. The consequence is, that no attention has been turned to manuring, or any other improvement. When one of these plantations has been "worn out," as it is called, it is sold to an adjoining planter for a very low price, say from one to five dollars per acre; consequently, one man will often become the owner of thousands of acres, with one tenth or one twentieth in cultivation. The old lands are suffered to remain uncultivated and unfenced, when they grow up in pines, briers, and finally the original forest growth of the country; these are again cleared and put under cultivation. This process has been repeated more than once, on the same piece of land, with success. It is interesting to perceive how rapidly, I might say sagaciously, nature will renovate the earth when turned over to her fostering care. On these deserted plantations are always to be found small lots, containing from 10 to 100, and sometimes several hundred acres of woods.

A small farmer may always buy an abundance of *good* land for cultivation, by taking the old land for nothing. Several hundreds of acres are often sold for a dollar, or less per acre. The usual rule is to sell the wood land for what it may be thought to be worth, and give to the purchaser the old land and houses for nothing.

Perhaps I could not give your readers a better idea of the state of real property, in the old part of Georgia, than by an account of a trade made a few weeks ago by a gentleman in this vicinity. He purchased a tract of land containing 1,000 or 1,200 acres, very desirably located, having 320 acres in woods. He gave $10 per acre for the wood land, and nothing for the balance.

On it there are 50 or 60 acres of low grounds that will bring 40 or 50 bushels of corn to the acre. The balance of the wood land will produce 25 to 30 bushels of corn, and 1,000 to 1,200 lbs. of seed cotton to the acre. A favorable year it would average a light bag of cotton per acre, the bag weighing 300 to 350 lbs. The wood land is well timbered with oak, hickory, poplar, walnut, &c. The old land, most of it grown in pine, would produce near half as much as the wood land. With manure, and the care given to land in countries where it is scarce, it might soon be made to double and treble the products above supposed. Our soil has a fine retentive clay foundation; some of it covered with a gray, and some with a strong mulatto loam.

Our planters are beginning to bring their creek and river-bottoms into cultivation, with great success. The soil from the upland has been washed on them, until they are as fertile, it would seem, as any soil in the world. Planters have so long had an abundance of fresh upland to cultivate, that they would not risk the destruction of their crops by inundation. But by proper draining, straightening, and clearing the channels, this can often be prevented; and experience has shown that corn is seldom injured by an inundation. The streams being small, the water passes off in a few hours, or days at farthest.

We are now beginning to learn that *old land, manured*, is the *surest* soil for cotton. *There is no end* to the materials for manure. The swamp deposites, as rich as vegetable deposite *can* be, are inexhaustible. During summer the pasturage on old lands and woods, not under fence, will support any number of cattle that one may choose to turn upon them. We usually stop feeding early in April. When our corn is gathered in the fall, it affords abundant pasturage until Christmas, and then we feed away the corn-shucks, or husks, till April. In this way our planters keep 50 to 100 head of cattle, less or more, according to their wealth. And yet, there are men who keep 100 head of cattle, 20 horses, 200 to 300 hogs, sheep, &c., who do not make 50 wagon loads of manure during the year. A farmer who understands making manure would be a blessing to any neighborhood in which he might settle.

Though the old part of Georgia does not suit large planters accustomed to the old habit of destroying the finest soil in the world, yet for moderate, or small farmers, or even large ones, disposed to improve, I believe it to be the most desirable portion of the globe. For $1,000 or $1,500, a comfortable house and out-houses, garden, &c., may be had, with several hundred acres of land, out of which might be selected 30, 40, 50, perhaps 100, or even more, acres of good wood land. Besides, out of the old land lots could be found of all sizes, say from 5 to 20 acres, of good level land, wanting nothing but a fair chance to become as fertile as may be desired.

No attention has been given to ditching until lately, and in a few instances, which is sufficient to show that a wonderful revolution will be effected in our agriculture by this means. The rich loam from the hills is deposited on the banks of creeks and branches, entirely susceptible of cultivation, in almost every instance by judicious draining. In thousands of places, a few acres may be had fit for cultivation without draining; but our people having been in the habit of plowing fields, varying from 10 to 100 acres in size, overlook these rich little nooks and corners, and will continue to do so as long as by removing to a new country they can be indulged in their old ways.

Where our land lies rolling, the soil is soon washed off by the heavy rains to which our climate is much subject. Very little effort has been made to prevent this; and where land is cultivated from year to year in corn or cotton, it is obvious that the soil will soon be gone from the hillsides. Indeed, the temptation to make cotton is so great, that our planters have generally been willing to sacrifice their lands for quick returns. The late low price of cotton had somewhat arrested this destructive system, but I fear it will return with the increased value of the great staple.

The middle, and particularly the mountain portion of Georgia, has water-power sufficient, I presume, to turn every manufactory in the United States. It may be had for almost nothing. There are some 20 or 30 cotton factories in the state, which are said to be doing well. An English company, I learn, has purchased a shoal on the Savannah river, and several thousand acres of land adjoining for the purpose of appropriating the whole of this copious stream to manufacturing purposes.

GARNETT ANDREWS.

Washington, Wilkes Co., Ga., Jan. 24th, 1844.

THE ENGLISH OAK IN AMERICA.

I NOTICE a communication in your February number, relative to the English Oak, (*quercus robur.*) That species was long since introduced by my grandfather, and a few years since we had 10,000 of them from 6 to 10 feet high, and advertised them, specifying their character of holding their foliage late, and being a kind of sub-evergreen. The name of oak, however, is so familiar to every one, that there were few or no purchasers, and after presenting a score or two to our then townsman, Richard L. Franklin, Esq., and a few to other neighbors, the balance were consigned en masse to the brush heap. There are two species of European oak that are much preferable to the English oak, and for the same properties for which that is recommendable, as well as for others which that does not possess. One of these is the Turkey oak, (*quercus cerris,*) the foliage of which is much handsomer, and remains green longer than the English oak. It is one of the most beautiful trees of the middle and south of Europe—in majesty equaling the most lofty; leaves long and pinnatified, and its long oval acorns borne on long peduncles, presenting the appearance of small pipes. The other is the Tawzin oak, (*quercus tawza,*) a tree of humbler growth than the preceding, but perhaps surpassing it in the beauty of its foliage; the leaves very deeply lobed, and as persistant as that species. This has also the property of flourishing on the most sterile soils, and I am inclined to think the Turkey oak will also do so.

WILLIAM R. PRINCE.

Prince's Nursery, Flushing, Feb. 13th, 1844.

N. B. Will your correspondent, S. S., page 43 of your February number, please to state what species of cherry his peach-trees are worked on ?

PLASTER NEAR SALT WATER.

I AM no farmer, and make no pretensions to familiarity with agricultural chemistry; but having tried plaster of Paris as a manure, and with much success, and seeing you are disposed to call the attention of your readers to the use of it on the seaboard, I place the following facts and reasonings at your disposal.

My residence, with a few acres of land around it, is about half a mile in a direct line from the Sound, and fully open to the influence of winds from the east and southeast, charged with the moisture of the ocean. I came to New Rochelle in the summer of 1839, and found a piece of land which was at my service as a pasture, and a little farther from the salt water than my house, (say a quarter of a mile,) almost completely worn out. The grass and daisies it produced were so worthless, that I gave them away to any one who would be at the trouble of carrying them off. Next spring I sowed plaster on it; and nothing else was used for manure. The crop of grass and red clover it produced struck the farmers who saw it with amazement. It was near a church, and a natural object of attention to a rural congregation, who knew it well. When the question was asked, "What manure has been used to resuscitate the land so wonderfully ?" and the answer was "Plaster, and nothing else," some were sorely puzzled. The lot has been constantly used since, both for mowing and pasturage, and large crops obtained by the use of plaster, and *nothing else.*

I have tried the same experiment on ground nearer the Sound, though there it has not been as clear a test of plaster *alone*; for stable manure was employed also. However, there where plaster was used most freely the red clover was thickest.

T. W. COIT.

New Rochelle, Feb. 7th, 1844.

ERRORS CORRECTED IN THE REPORT OF MR. PELL'S EXPERIMENTAL FARMING.

See an account of Mr. Pell's experimental farming in the report of the proceedings of the New York Farmers' Club, page 359, Vol. II., of the American Agriculturist, in which the Secretary of the Club wishes to make the following corrections of errors.

1. "That Mr. Pell sprinkled about a bushel of salt over every load of hay." It should have been "over every alternate layer composing a ton."

2. "That he had twenty thousand apple-trees in full bearing." It should have been "in bearing," being eighteen years old. The communication signed "Dutchess County," page 53 of the March No. of the current volume of the Albany Cultivator, says "they plant apple-trees from 36 to 40 feet apart, allowing 25 or 30 trees to the acre." Mr. Pell's trees are planted 19, 20, and 25 feet apart. Nineteen feet apart would allow each acre 121 trees, 20 feet apart, 109 trees, &c., &c.

The object in thus planting, was to obtain fruit ten or twelve years after they came into bearing, as fruit from young trees is usually found to be of superior quality. When they interfere with each other, the centre tree will be cut out, and they will then be 38, 40, and 50 feet apart.

3. "That he employed a man from Vermont to engraft 10,000 apple-trees." It should have been "400 apple-trees, (being 18 years old,) in which trees, 10,000 grafts were set."

4. "That out of the 20,000 grafts, few fail

ed." It should have been "that out of 10,000 grafts, not more than ten per cent. failed."

H. Meigs, *Sec. of the N. Y. Farmers' Club.*
March 7th, 1844.

Lime as Manure.—In answer to inquiries in your paper, Vol. III., page 71, relative to the price of lime by the quantity, I will furnish, delivered in New York, or in the vicinity, for the sum of 85 cents per cask, of three bushels each, at any good landing-place where a vessel can safely go drawing 8 or 9 feet water. I should be happy at any time to receive orders for lime, which will be promptly met. Wm. A. Norwood.

Camden, Me., March 5th, 1844.

CHOICE FRUIT.

A farmer finds few things in life more difficult and perplexing, than to make his selection of fruit trees from a nursery containing several hundred varieties of fruit. To obviate this difficulty, I propose giving a list and short description of such as will give satisfaction to purchasers. I give the name best known in capitals, but when there are several names for the same fruit, I give the synonymes in italics.

APPLES.

Early Harvest, *Prince's Yellow Harvest, July Pippin.*—Fruit medium size; bright straw color; flavor fine—ripe in July and August.

Early Red Juneating, *Red Margarett, Strawberry.*—Rather small; very rich and fine—ripe in August.

Summer Queen, *Early Queen.*—Fruit large and oblong; striped with red on a yellow ground; high flavored and fine—ripe in August.

Summer Pearmain, *American Summer Pearmain, Early Summer Pearmain.*—Too well known to need any description—ripe in August.

Porter Apple.—This is a new variety that originated on the farm of Rev. S. Porter, Sherburn, Massachusetts. Fruit large; oblong shape; skin bright yellow, with a red blush—ripe in October, and commands the highest price in the Boston market.

Fall Pippin, *Golden Pippin, Holland Pippin, Cobbett's Fall Pippin, Vandine.*—Of all fall apples, this stands at the head of the list. Fruit large and of a roundish oblong form; skin smooth and yellowish-green, tinged with orange; flesh tender, with rich juice—ripe in October, and keeps till January and February.

Seek-no-Further, *Rambo,* or *Romanite.*—This fruit is much cultivated about Philadelphia. Shape flat, resembling the Vanderveere, but is a better fruit; skin pale yellow, streaked with red; flesh tender and sprightly during the fall—is both a fall and winter apple.

Stroat, *Straat.*—A fine fall apple, introduced by the late Judge Buel, of Albany—in use from September to December.

Esopus Spitzenburg.—Fruit large and oval shape; color red, covered with light yellow spots; flesh of the finest flavor for dessert or cooking, and keeps till February.

Baldwin, *Baldwin Pippin.*—In the Boston market this fruit has long brought the highest prices. Color bright red, tinged with yellow; flesh juicy, rich, sweet, and most agreeable flavor—ripe in November, and keeps till March.

Belleflower.—A beautiful fruit long celebrated about Philadelphia as their finest winter fruit—ripe in October, and keeps till March.

Blue Pearmain.—A well-known fruit about Boston Large size; color red, covered with a blue bloom; flavor delicious, and keeps till January.

Hubbardston Nonesuch.—A most popular new fruit lately brought out in Massachusetts, often commanding $5 per barrel in the Boston market—ripe in November, keeps till February.

Maiden's Blush.—One of the handsomest fruits in the country. Size large, roundish shape; skin pale greenish yellow, tinged with a blush; excellent for table use or cooking—ripe in August and September.

Lady Apple, *Pomme d'Api.*—Fruit small; of pale yellow color, deeply tinged with red on one side; flesh crisp and pleasant—ripe in November, and keeps till April.

Monstrous Pippin, *Gloria Mundi, Ox Apple.*—Fruit of enormous size, sometimes weighing 28 ounces; of a pale yellowish green color; sprightly flavor—ripe in October, and keeps till January.

Newton Pippin.—Of this most valuable apple there are two varieties, the yellow and the green; no difference in quality; keeps till May, and retains its flavor—the most valuable variety for shipping to Europe.

Rhode Island Greening.—Fruit large; skin greenish yellow; flesh slightly acid and of fine flavor; keeps from November till April.

Roxbury Russet, *Boston Russet, New England Russet.*—Has been long known about Boston; size medium; fine yellow russet color; flesh rich, juicy, sub-acid; and keeps till June.

Swaar Apple.—A celebrated winter fruit in some part of New York; of fine flavor; skin greenish yellow, tinged with a blush—keeps till March.

Wine Apple, *Hay's Winter, Large Winter Red, Fine Winter.*—A beautiful fruit highly esteemed in the Philadelphia market—keeps till February.

Hollow-core Pippin.—A new variety raised in Jefferson county, Ohio. It resembles the yellow Newton pippin in its fine flavor—keeps till April and May.

Ohio Pearmain.—A new and beautiful variety in Ohio; good size; striped red and yellow; quality excellent—keeps till May.

Harrison and Camfield.—Both long raised in the neighborhood of Newark, New Jersey, and **Hugh's Virginia Crab,** much cultivated in Pennsylvania and Ohio, are decidedly the most valuable varieties for cider to be found in the country.

In the west and other portions of our widely-extended country, many new varieties of choice apples are constantly coming into use. The above are varieties found at most of the nurseries in the eastern states.

PEACHES.

The following varieties of peaches are those principally cultivated by the peach-growers of New Jersey and Delaware for the markets of Philadelphia and New York. They furnish a succession of fruit for ten or twelve weeks.

Troth's Early Red.—The finest of all early peaches—ripe in August.

Red Cheek Rareripe.—One of the best peaches cultivated in the country; size large; flesh rich, juicy, and delicious—ripe in September.

Early York, *Early Red Rareripe, Early York Rareripe.*—Size medium; color rich red; flesh juicy, rich, and luscious—ripe early in August.

Morris Red, *Gross Mignonne.*—Fruit large; skin greenish yellow, with a blush; flesh melting and delicious—ripe in September.

Morris White, *White Rareripe, Lady Ann Stewart.*—Fruit large; form rather oval; skin yellowish white; flesh white, rich, juicy, and sweet—ripe in September.

Yellow Rareripe, *Yellow and Red Rareripe, Large Yellow Nutmeg.*—Skin yellow and red; flesh firm, rich, and delicious—ripe in August and September.

Large White Rareripe.—As its name denotes, a large white fruit—ripe last of September.

Red Cheek Melacaton.—Fruit large; form oval; skin yellow, with red cheek; flesh rich, mellow, juicy, and luscious—ripe in September.

Oldmixon Freestone.—Fruit large; skin white, with a blush; flesh juicy, melting, rich, and luscious—ripe in August.

Smock's Freestone.—Some specimens of this fruit have measured 12 inches in circumference; shape oblong; skin yellow and dark red; flesh yellow, rich, melting, and delicious—ripe in October.

Reeve's Late Yellow Freestone.—A new variety, highly prized in the Philadelphia market—ripe in September.

Freestone Heath.—Fruit large, oblong, and beautiful; color yellowish green, crimson next the sun; flesh rich, juicy, and vinous—ripe in September and October.

Late Heath Cling.—Fruit very large; oval form; skin downy, nearly all white; flesh rich and high flavored, tender, and juicy—ripe in October.

Oldmixon Cling.—This is considered the finest of all cling-stones; skin yellow, with a bright red cheek; flesh rich, juicy, sweet, and high flavored—ripe in September.

Lemon Cling, *Kennedy's Carolina, Pineapple Clingstone.*—Size large; shape oval; skin yellow, with a blush; flesh firm and rich; some have weighed 12 ounces each—ripe in September.

Rodman's Cling.—Size large; of a pale yellow color, with a blush on one side; flesh juicy, vinous, and delicious—ripe last of September.

Eastburn's Choice.—A new and valuable variety; fruit large and nearly round; skin pale yellow, with a red blush; flesh yellowish white; juice pleasant and sprightly—ripe in October.

Tippecanoe.—A new and splendid variety which takes the first rank at the Pennsylvania horticultural exhibitions. Size large; color beautiful yellow with a red blush; flesh yellow, firm, and juicy—ripe in October.

Columbia.—Fruit medium size; skin rough and thin; color dull red; flesh yellow and fibrous, similar to a pineapple, juicy, and rich—ripe in September.

Crawford's Late Melacaton.—Fruit very large and round; skin yellow and red; flesh yellow, juicy, and sweet, with an agreeable acidity—ripe in September and October.

Many of the above peaches are cultivated in different sections of the country under different names. There are also many new seedling varieties in different parts of the country of excellent quality, but are not known out of their immediate vicinity. It is to be hoped that the general interchange of scions lately established by the American Institute will assist to bring into notice the choice varieties of fruit from distant portions of the Union.

PEARS.

When some of our nurserymen offer from three to four hundred varieties of pear-trees, it must, to a new beginner, and one entirely unacquainted with the different varieties of fruit, be a most difficult undertaking to make a selection. The present object is to give a list of such as will bring a succession of fruit, and are well known varieties.

Beurre d'Amanlis.—Size large; color green, changing to yellow, with a blush; flesh melting, juicy, and excellent—ripe in August and September.

Bloodgood.—A large fruit, of a dull yellow color, covered with dark russet spots; quality excellent—ripe in August.

Crawford.—Size medium; skin light yellow; flesh tender, juicy, and good—ripe in August.

Dearborn's Seedling.—Fruit medium size; skin smooth, thin, and green, with russet spots; flesh melting and of fine flavor—ripe in August.

Jargonelle.—Fruit large; pale green color, a little marked with red; flesh melting, juicy, with a slight acid; rich and fine flavor—ripe in August; the tree a productive bearer.

Steven's Genesee Pear.—A new American variety of large size; color mellow green; flesh white, juicy, and melting; flavor excellent—ripe in October.

Bartlett, *William's Bonchretien, Autumn Superb.*—One of the most superb varieties; color tinged with red; flesh very melting and delicate; juice perfumed, sweet, and abundant—ripe early in September.

Belle Lucrative.—A beautiful Flemish fruit; skin yellow, with a slight blush; flesh melting and juicy—ripe in October.

Bleeker's Meadow, *Large Seckle.*—Skin yellow, tinged with dull red; flesh melting, juicy, and delicious—ripe in November, and keeps till January.

Brown Beurre.—Fruit large; greenish yellow and dark red color; flesh melting, buttery, and excellent—ripe in October and November.

Cushing.—Skin light yellow, mottled with dull red on one side; flesh melting, white, and sprightly—ripe in September and October.

Dix.—Large yellow fruit, with a blush; flesh melting and excellent—ripe in October.

Harvard.—Fruit of good size; skin russetty yellow, tinged with red; flesh juicy, melting, and excellent—ripe in September and October.

Marie Louise.—A splendid fruit; skin yellowish-green and cinnamon-colored russet; flesh melting and rich—ripe in October and November.

Seckle.—This is considered by many the finest variety in this country; color from yellowish to brownish russet, red next the sun; flesh juicy, melting, spicy, and very superior flavor; tree an abundant bearer—ripe in September and October.

Virgalieu, *Butter Pear*, in Pennsylvania, *St. Michael's* of Massachusetts, and has thirty other names in different parts of the world. Fruit middling size; skin pale citron yellow, with cinnamon russet, speckled; flesh white; juicy, buttery, and delicious—ripe in September and October.

Beurre d'Aremburg.—Fruit large; flesh rich, melting, juicy, and high flavored; and keeps till March—the tree a great bearer.

Columbia.—An excellent native fruit; size large; fine yellow color, tinged with red; flesh rich, juicy, and excellent—ripe in November, and keeps till January.

Easter Beurre.—Fruit large; color green, but yellow at maturity; flesh yellowish-white, buttery, and melting, and very high flavored—eatable in November, and keeps till May.

Pound Pear.—Fruit very large, has weighed 33 ounces; skin rough, covered with dull russet; excellent for baking or stewing in winter.

Surpasse Virgalieu.—Fruit large and nearly round; skin yellow, with a light blush; flesh rich, juicy, and delicious; tree an excellent bearer—ripe in October and November.

Vicar of Winkfield, *Monsieur Le Curé.*—Fruit large; skin russetty yellow; flesh rich, sweet, and excellent—in eating from December till February.

There are many other valuable varieties, and those who wish for larger assortments, will find very full descriptions of fine fruits in the last edition of Bridgeman's Young Gardener's Assistant.

CHERRIES.

Downer's Late Red, *Downer's Favorite.*—Fruit large and round; color light red flesh firm and fine—ripe after most other varieties are gone.

Kentish, *Early Kentish, Long Stem, Montmorency.*—Fruit round; skin red; flesh acid; juicy and abundant; fine for cooking—ripe in July.

May Duke, *Early Duke, Holman's Duke, June Duke.*—Fruit roundish and grows in clusters; skin very dark red; flesh soft and juicy—ripe in June.

American Amber, *Early Amber, New Honey.*—Fruit beautiful and of medium size; dark pink or amber color; flesh rich, sweet, and fine—ripe in June.

American Heart, *Arden's White Heart.*—Color pale yellowish; flesh tender and palatable—ripe in June.

Manning's Black Bigarreau.—A new variety from the nursery of the late R. Manning, of Salem, Massachusetts. Fruit large; flesh sweet and of peculiar fine flavor—ripe in July.

Yellow Spanish, *Graffion, Imperial, White Orleans, Turkey Bigarreau.*—Fruit very large; heart-shaped; amber color, red next the sun; flesh firm, sweet, and fine flavored; one of the very best varieties; tree an abundant bearer—ripe in July.

Ox Heart, *Harrison's Heart, White Bigarreau.*—Fruit large; heart-shaped; color pale yellow and white, mottled with red; flesh white, firm, and well flavored—ripe in June.

Black Eagle.—A handsome variety; fruit of globular form; skin dark purple; flesh tender, rich, and of fine flavor—ripe in July.

Black Tartarian, *Black Russian, Ronald's Large Black Heart.*—Large heart-shaped and of very superior quality; color dark shining purple or black; flesh firm, purple, and sweet; tree very productive—ripe in June.

Elkhorn, *Black Ox-Heart, Large Black Bigarreau.*—Fruit large and heart-shaped, an excellent variety for market—ripe second and third week in July.

Knight's Early Black.—Color rich, dark hue; flesh firm, juicy, and sweet—ripe in June.

Napoleon Bigarreau.—One of the finest varieties; fruit white, with red spots; size large; flesh white, solid, and sweet—ripe in July.

White Bigarreau.—One of the largest and finest varieties. Fruit heart-shaped; skin yellow, with a red cheek; flesh firm and fine flavored—ripe in July.

Late White Heart.—Middle size; pleasant flavor; valuable as a late variety—ripe the last of August.

White Tartarian.—An elegant fruit; pale yellow, approaching to amber next the sun; fine flavor, and a good bearer—ripe in July.

PLUMS.

American Yellow Gage.—Oval shape, bright yellow color, equal to the green gage—ripe in August and September.

Bingham, *Bingham's Yellow Cling.*—A justly celebrated large, handsome variety; flesh rich and delicious—ripe in September.

Bleeker's Gage.—A new and valuable variety; skin dark yellow, with red spots—ripe in August.

Coe's Golden Drop.—One of the finest and handsomest plums in the country—ripe in September and October.

Columbia.—New seedling variety; light purple color; the tree a great bearer—ripe in August.

Downing's Emerald Drop.—Fruit handsome, of a green color; flesh firm and of delicious flavor.

German Prune.—Valuable for drying; skin red and purple; flesh yellow with a slight acid—ripe in September.

Goliath.—Fruit large, sometimes weighing four ounces; flesh pale yellow, firm, and good flavor; the tree a great bearer—ripe in August.

Green Gage.—Too well known to need description; one of the most desirable varieties known—ripe in August.

Huling's Superb.—Size large; skin greenish yellow; flesh sweet and excellent—ripe in August.

Lucomb's Nonesuch.—Very large, resembles the green gage—ripe in August, and a great bearer.

Nectarine Plum.—The fruit beautiful; skin varies from red to crimson; flesh yellowish, of a mild, pleasant flavor—ripe early in August.

October Gage, *Frost Gage.*—A valuable native fruit—ripe in October, when most plums are out of season.

Prince's Imperial Gage.—Fruit of the finest quality; skin yellow; flesh rich, and of excellent flavor—ripe in August.

Blue Magnum Bonum.—Size large; color blue; flesh firm and excellent for preserves; tree an abundant bearer—ripe in September.

Blue Gage, *Purple Gage.*—Medium size; skin purple, covered with a bloom; flesh rich and fine; tree a great bearer—ripe in August.

Bolmar's Washington.—Has weighed four ounces; color greenish yellow, with crimson specks; flesh yellow, firm, sweet, and delicious—ripe in September.

White Magnum Bonum, *White Mogul, White Holland, Egg Plum, Yellow Magnum Bonum.*—Fine size; skin yellow, covered with white bloom; flesh yellow, rich, firm, and excellent for cooking or preserving—ripe in September.

Red Magnum Bonum, *Red Imperial, Purple Egg.*—Size large; deep red color, covered with blue bloom; flesh harsh and acid; excellent for cooking and preserves—ripe in September.

Prince's Orange Egg.—A large beautiful orange-colored fruit; flavor rich—ripe in August.

SOUTHERN CALENDAR FOR APRIL.

At the beginning of this month attend to the planting of cotton as directed in March. Continue its culture as recommended by Dr. Philips in the American Agriculturist, Vol. II.

Plant upland rice in drills about eighteen inches apart, or sow broadcast, and harrow in the seed as is directed for lowland rice. Cover the ground two inches thick with old rice straw, in order to keep down grass and weeds, and to nourish the crop. Irrigation is unnecessary in the culture of this variety of rice. It will grow on poor sandy ridges, and also on wet lands. Continue sowing lowland rice.

Attend to the cane-fields, keep the earth loose and clear of weeds.

Occasionally stir the earth around the tobacco plants, both with the hand and the hoe. At first, *shave* the surface, and after the plants increase in size, gradually draw a slight bed toward them. Closely examine the plants every night and morning, and destroy the numerous worms which feed upon them. First look for a small grub about the roots under ground, and afterward a large ugly worm which feeds upon the leaf. There is also a small worm which attacks the buds of the plant, and if not killed, will prove a sure destruction of its further growth. Another worm of a smaller size may be found within the two coats of the leaves, which feeds on the juices alone. All of this work can be done by boys and girls from ten to fourteen years of age.

Prepare your ground for sweet potatoes by ridging up rows about four feet apart. Set out your drawings similar to cabbages, eight or ten inches asunder in the ridges, as fast as they rise, and the season will permit. Some prefer large round hills four feet apart each way to drills. Hoe and plow your Irish potatoes and Indian corn. Sow cabbage, savory, and cauliflower seeds for next winter, but let them remain in the nursery-bed until August. Sow carrots and parsneps. Plant young orange-trees and water them until they take root.

You may now set out all kinds of evergreens successfully.

See Northern Calendar for June.

NORTHERN CALENDAR FOR APRIL.

This is the month when the general plans of the husbandman should be laid out for the coming season. His farm should be plotted, and each field assigned its crop for the year. What manure is left in the barnyard should be got out this month if possible. Plowing may be done on all light sandy or gravelly soil, as soon as the frost is out of the ground. But on all clay soils, their exact condition should be observed, and if not previously plowed in the fall, *as they always should be*, they must be turned over only when they are comparatively dry. Plowing when wet mixes the soil into a mortar, which subsequently bakes into large lumps, in which condition it remains through the summer, unless beaten in pieces at great trouble and expense. Deep plowing is too much overlooked. It should be the object of the farmer constantly to deepen his soil by cultivation, and in proportion as he enriches it, a small quantity of the subsoil should be brought up for improvement. By this means the roots of the plants will have greater resources for food, and before he is aware of it, his crops will be doubled by this system. The mowing fields should be put in order, by carrying off any surface water there may be upon them; and all the stones should be carefully collected and put into fences or used for making under drains, to convey the water from springs, or such as can not be otherwise carried away from stiff clay, or boggy lands. Spring wheat ought to be got into the ground early after the snow leaves it. Oats and barley may follow. Corn for soiling may be sown broadcast, or closely in drills. All early potatoes, and most of the early vegetables in the garden, may be planted. The garden should be particularly attended to. As much frequently may be raised on an acre of ground, for the support of the family in a garden, as from the best five acres of the farm. Plaster, with which any farmer who can use it to advantage ought to be well supplied, may be sown in this and the following month. *It is the cheapest manure he can apply*, in connexion with other manures, and it ought to be used liberally, wherever it is found beneficial. Field peas may now be sown, and if ground has a good exposure to the sun and is dry, some corn may be planted. The fences should be thoroughly staked up on every part of the farm, so as to prevent waste of time and crops from the inroads of unruly cattle.

Animals should not be suffered to get into the fields before a good bite is afforded them, and they should at all times, but especially when first allowed to run on grass, be well supplied with salt, to correct the frequently too purgative effects of the fresh feed. Look particularly after the young things, and do not allow them to follow their dams into the fields till the ground becomes dry, warm, and firm.

Sow hemp-seed the early part of this month where the climate will answer; for full particulars of its cultivation, see Vol. I. of the American Agriculturist. Sow tobacco-seed also, and the last part of the month plant castor beans.

Kitchen Garden.—During this month, early cucumbers, melons, cabbages, cauliflowers, lettuce, radishes, &c., which have been brought forward to the hot-bed, should be transplanted into the open ground. Attend to the asparagus bed, if not prepared before, according to the directions of last month. All kinds of table vegetables and early root crops sow in the open ground. Tomatoes, egg-plants, and peppers, that have been forwarded in pots, plant out the latter part of the month. Draw out the sweet potato sprouts and plant them.

Fruit Garden and Orchard.—All kinds of fruit and forest-trees, and shrubs, should be transplanted this month, before the leaf-buds shall have come out. All grafting and spring inoculating performed. Strawberry beds dressed and cleaned. Currants, raspberry, and gooseberries, that have not before received attention, can now be pruned; the latter should be pruned to open heads for the admission of sun and air, be well manured about the roots, and the soil made loose and mellow with the spade; the roots of peach trees be examined, and the worm cut out with a knife. Scions may be set the last of this month, and all the exposed wood should be carefully protected by wax. Several compositions may be used for this purpose, but perhaps as good a one as can be made consists of 3 parts of bees-wax, 3 parts rosin, and 1 part tallow, which is best secured by putting on bandages of new, strong cotton cloth.

Flower Garden and Pleasure Grounds.—Bulbs that have not yet started ought now to have the earth about them stirred, to the depth of three or four inches. The borders of the flower-garden be made up, and perennial herbaceous plants transplanted. Seeds of annuals should not be sown until next month. Hedges and shrubs may be trimmed, and box-edging set out. Put in order the gravel-walks and pleasure-grounds, and, if necessary, give the lawn a top-dressing of ashes. Deciduous trees should be transplanted this month if not done before, and shrubbery for the door-yards and gardens. Too little attention is paid to these last in our country. Many a farmer will spend $50 a year to procure ribands, gauzes, and artificial flowers, for his wife and daughters, when one fifth of the money would furnish him ornamental grounds throughout the year. Fruit-trees are ornamental as well as useful, and are perhaps the most profitable use to which he can put a few acres. The choicest kinds of every species should be selected, for it costs but little more to raise the best kinds than the poorest, and they frequently produce him five times as much in value. A large hole should be dug for the reception of the roots, which should be filled with loose mould, and when the tree has a large top, some branches should be lopped, and the extremities of the twigs cut off.

FOREIGN AGRICULTURAL NEWS.

By the arrival of the steamship Caledonia, we are in receipt of our European journals to the 5th March.

MARKETS.—*Ashes* are steady, but little doing in them, holders anticipating an advance. *Cotton*, especially of the low and middling grades, has fallen ⅛*d.* per lb., and a very moderate business has been done in it; the spinners confining themselves to purchases for their immediate wants, only, the past month. The import into Liverpool, since the 1st January last, has been 200,000 bales, against 207,000 at the same period last season. The stock on hand is estimated at 628,000 bales, against 444,000 same time last year; the stock of American is an increase of 175,000 bales. *Flour* and *Wheat* were rather more in demand, and at a slight advance of prices. *Beef*, *Pork*, and *Hams*, in good request, with an upward tendency; an extensive trade in these articles is anticipated. *Lard* is much depressed, and smaller shipments advised. *Cheese* of the finer sorts, a light stock, and many inquirers. *Oil-Cake* has a downward look. *Naval Stores* in fair demand. *Rice*, no change. *Tallow* and *Tobacco* more active, and larger sales than were anticipated at this season.

Money as abundant as usual, the bullion in the Bank of England still on the increase, being nearly £15,000,000 (about $72,000,000.)

American Stocks merely nominal, and little done in them the past month, except by speculators.

Business generally is increasingly active, and all branches of trade are well employed; there seems to be no doubt that the present will be a prosperous year.

The Annual Show of the Royal Agricultural Society of England, will be held at Southampton on the 24th, 25th, and 26th of July next.

Beef for the English Market.—Not a circular do we receive, that does not emphatically point out the necessity of packing beef for the English market cut from HEAVY, WELL-FED CATTLE of an IMPROVED BREED and as *nearly as possible* into 8 lb. pieces. Our stock-raisers would gain immensely if they would pay proper attention to these facts.

Increase of Stock of American Cotton.—By our late monthly cotton circular from Liverpool, we notice that the quantity of American cotton on hand, has increased 175,000 bales this year, over that of any previous corresponding season. This is a very important fact, and should be immediately made known to our planters; for if such an increase has taken place principally from the large crop of '42, notwithstanding the greatly diminished one of '43, the south should be careful to continue the system of supplying itself from its own resources, and put its *surplus* labor only into cotton and the other staple products usually exported.

Mr. Colman's Tour.—In a letter by the Caledonia, to his publisher in Boston, Mr. Arthur D. Phelps, Mr. Colman says, that an edition of his Agricultural Tour being desired in England, he put the MSS. for his first number into his publisher's hands there on the 1st Feb. last, but that he has greatly disappointed him, and kept putting it by for other work. He is now promised his first number on the 16th of March, when it will be immediately sent to Boston. Mr. Phelps writes us, if received at this time, it will be issued by him on the 6th of May. We quote the following from Mr. Colman's letter. "By the time my first number is out, my second will probably be ready for the press; and if my health is spared, I have confident hopes of getting *four* numbers out by the 1st of June. But I am sadly disappointed by my printer. I trust that my friends will wait patiently a few weeks longer, and they will then see that I have not been an idle traveller, or forgetful of their interests."

Proposed Agricultural Colleges.—The establishment of Agricultural Colleges and Example Farms in different districts of the kingdom is now engaging the attention of some of the leading agricultural bodies. It is proposed that in these colleges, or agricultural seminaries, young men intended for agricultural pursuits shall pursue a course of study combined with practical illustrations of the science and practice of agriculture, so as to fit them for obtaining situations in the service of landed proprietors as stewards, or for carrying out at home correct principles of husbandry and farming. It is intended that the in-door establishment shall consist of a head and second master, who shall instruct the pupils in the elements of education, together with land-surveying, the use of the water-level, the theodolite and chain, and everything applicable to agricultural pursuits. With a view of rendering them practical farmers, every pupil is to be made a plowman, and to be taught not only how to use the plow, but how to settle the irons for every soil, and all kinds of work. Their attention is also to be turned to stock of all descriptions, and to the making and repairing of fences. Lectures are to be delivered by head-farmers on the practice of agriculture, explaining the reasons for adopting any particular crop or rotation of crops; also, on the breeding, feeding, and proper management of stock, the drainage, reclamation, and improvement of land, and the invention and proper application of agricultural implements.

To make Ewes own their Lambs.—Sprinkle a little fine salt over the disowned lambs, this will usually attract the mothers, and when once the operation of licking has been performed there is seldom any danger of desertion.

Domestic Yeast.—Boil one lb. of good flour, ¼ lb. of brown sugar, and a little salt in two gallons of water for an hour. When milk-warm, bottle it and cork it close, and it will be fit for use in 24 hours.

Condensation of Carbonic Acid by Charcoal.—The cells of wood-charcoal have a diameter of about one twenty-four-hundredth of an inch, and if a cubic inch consisted entirely of cells, their united surface would amount to 100 square feet. By experiment it can be shown that the cells constitute five eighths of the whole cubic contents of the charcoal; and allowing for the space occupied by the charcoal, the actual surface of the cells will be about 73 square feet. When charcoal is plunged into carbonic-acid gas, it absorbs into its cells no less than 56 times their cubic contents at the ordinary temperature and pressure, and consequently the gas is condensed to 56 atmospheres. But according to the experiments of Addami, carbonic-acid liquefies under a pressure of 36.7 atmospheres, and we are hence compelled to conclude that above one third of the carbonic acid which is condensed on the walls of the cells is in the liquid state.

Value of different kinds of Wheat.—Sir G. S. Mackenzie states; that he found upon analyzing eight varieties of wheat, they yielded an amount of gluten varying from 10, 19, to 21 per cent. of gluten. Now the value of wheat flour depends mainly upon the amount of gluten contained in it; and yet, owing to purchasers not being able to detect this by the eye, that which has the least gluten in it, and is consequently least valuable, frequently brings the highest price. Analytical experiments by others have shown that the amount of gluten varied from 11 to 35 per cent. The wheat producing only 11 per cent. of gluten was manured with cow-dung, while that giving 35 per cent. was manured with human urine.

Editor's Table.

Pennsylvania Farmer, 24 pages double columns octavo, monthly, price $1 a year, by J. H. Bryson, editor and proprietor, Lancaster, Pa. The first number of this work was issued in January, but in consequence of not getting a copy we could not sooner notice it. This new candidate for agricultural favor is neatly got up, and filled with valuable articles. We wish it success, and hope it may be the means of inducing the farmers in its vicinity and abroad to subscribe for it.

The Western Cultivator, of the same form, number of pages, and price as the above, edited and published by W. Thompson Hatch, Indianapolis, Indiana, commenced in January last. We can only refer our readers to what we have said of the Pennsylvania Farmer for a good idea of this new colaborer in the cause of agriculture.

An Introductory Lecture to the course of Chemistry and Pharmacy, in the Medical Department of St. Louis University; by A. Litton, M. D., Professor of Chemistry and Pharmacy. A capital good lecture, published in a neat octavo pamphlet of 23 pages.

The Spirit of the Times.—This sterling paper commenced its 14th volume on the 2d of March, at *half* the price it has hitherto been published at, viz: $5 a year, and this without reducing its size, which is 12 pages large folio, weekly. The paper and embellishments are as handsome as ever, the typography as neat, and the variety, spirit, and ability of its contents equal, if not superior to anything that has gone before it. How the publisher can afford such a paper at *half its former price* we are at a loss to divine; however, that is *his* affair, not ours, and all the public has to do in the matter, is just to fork over plenty of its V's, and ask no questions; they will at least get their money's worth in fun, besides finding out all about horse-flesh, field-sports, and literature. Edited as usual, by Wm. T. Porter, and published by John Richards, No. 1 Barclay street, New York.

The British American Cultivator, 16 pages quarto, monthly, price $1 a year; W. G. Edmunson editor and proprietor; Toronto, Canada West. We have often taken occasion to speak of this excellent agricultural paper. It is now in its third volume, and we find it replete with matter calculated to do great good among the farmers of the British Provinces. We understand its circulation has considerably increased of late, and we trust it may never lack that encouragement which it so richly deserves.

Spanish Publications on Agriculture.—We are favored by our friend Don Antonio Freyre, with the first 18 numbers of El Fanal de Puerto Principe, and a pamphlet of 70 pages, octavo, of the Memorial de la Sociedad Patriotica, of the island of Cuba. Both of these publications abound with interesting articles on agriculture, and we are glad of the opportunity of their reception, to renew our acquaintance with the noble Spanish language, and learn something of the tropical system of farming. Cuba is making very rapid advances in the development of her great agricultural resources.

Address Delivered before the Hancock Planters' Club, Georgia, by Eli H. Baxter, Esq. We find the above admirable address in the Southern Cultivator, and we can only regret that we have not room to transfer it to our columns. It ought to be printed in a tract, and distributed throughout the state. We make a short extract for the benefit of state legislatures still in session. "Though all admit the great importance of this branch of the public interest, [meaning agriculture,] yet look to your own legislature and see how it is neglected and disregarded. You will find upon its journals, a long catalogue of standing committees upon various subjects connected with the public interest, yet you will find no standing committees upon agriculture. Long and elaborate reports are made upon the contemptible humbugs of the day, yet not a breath is spent upon this all-important interest."

Elements of Chemistry, Including the most Recent Discoveries and Applications of the Science to Medicine and Pharmacy, and to the Arts, by Robert Kane, M. D., &c., &c. An American edition, with additions and corrections, and arranged for the use of the Universities, Colleges, Academies, and Medical Schools, in the United States, by John William Draper, M. D., &c., &c., published by Harper & Brothers, 82 Cliff street: a large octavo, of upward of 700 pages, with numerous illustrations—price $2. This is acknowledged to be the very best elementary work upon chemistry extant; and as such, we earnestly recommend it to the attention of all who wish to make themselves acquainted with this highly necessary and popular science. It is handsomely got up on good paper, with clear type, and its perusal has given us great satisfaction.

The Agricultural and Mechanics' Association of the State of Louisiana, held its annual Show at Baton Rouge on the 8th of January. Judging from a detail of the proceedings in the Concordia Intelligencer, it was a spirited affair, and well attended. The address was by the Hon. T. H. McCaleb, and is highly spoken of. It rejoices us to see the spread of these societies at the south.

A great Butter Cow.—Col. Jaques stated at the sixth agricultural meeting in Boston, that the Oaks Cow, which he purchased of President Quincy, made 484 lbs. of butter during a single season. She was afterward ruined for milk by being fed too much Indian meal. On this she rapidly accumulated flesh, but almost entirely ceased giving milk.

Mr. C. N. Bement, landlord of the American Hotel, in State street, Albany. Mr. Bement writes us that he has taken this fine hotel and turned landlord again; but adds with decided *pertinacity*, that he is not by this movement going to give up farming—not he—but will be prepared to drive a bigger team than ever in this line. Well, we retain some pretty distinct recollections of Mr. B. in this same occupation, some six years ago, and we believe at the very same stand, and all is, if he keeps as good a house hereafter as he did then, (of which we can not doubt), we advise all our friends to place themselves under his care when they visit Albany—they will at least find themselves in the focus of everything in the agricultural line in that vicinity by so doing.

Charcoal and Guano.—Mr. Teschemacher, in Hovey's Horticultural Magazine says, that by mixing one fortieth part of charcoal with a compost made of two parts loam and one of old manure, and carefully and intimately mixing the whole, and then applying it to green-house plants in the pot, and watering with water in which guano had been mixed at the rate of one ounce to ten gallons, this treatment produced the most astonishing effects, not only in the growth, but general health of the plants.

Threshing-Machines.—We beg attention to Messrs L. Bostwick & Co.'s advertisement of Warren's Threshing-Machines. We have personally examined them, and owing to their great simplicity, strength, and cheapness, think them especially well calculated for the south. We shall be pleased to receive orders for the same, and indeed any other agricultural implements.

HINTS TO CORRESPONDENTS.—We should feel under great obligations to our correspondents when they address us to observe the following rules:—

1. Procure good pens and deep-colored ink, and then write in a clear plain hand—especially proper names, technical terms, unusual words, or those taken from foreign languages. If under the necessity of making many erasures and additions after the article is written, copy it.

2. Never use a capital letter in beginning a word which comes in the body of a sentence, unless it is known to be proper. Avoid joining words together in writing.

3. Never use a *dash* at the close of a sentence, but a *period*. Printers always follow "*copy*," and in revising a communication, we are obliged to go through the labor of erasing all improper points, and substituting the proper ones. If one has not been in the habit of reading "*proof*" from the press, he had better merely add the period at the end of each sentence, divide his communication into proper paragraphs, and leave the arrangement of minor matters to the judgment of the proof-reader, who is daily accustomed to the occupation, and will usually point the matter in hand more correctly than any one else, save professed scholars. He will also correct any misspelling, or errors in grammar.

4. Use the plainest and most simple words at command, and above all things, avoid the learned, or hackneyed phrases of "*modus operandi*," "make two spears of grass grow where one did before," "your valuable paper," "your invaluable paper," &c., &c.

5. Introduce as much practical matter into communications, as possible; and be full, clear, and concise, in relating facts.

6. When forwarding a good communication for this paper, you need not pay the postage; it is only when gentlemen address us upon their own business that we require the prepayment of letters. But as postage is a heavy bill to us, we hope our correspondents will, whenever possible, avail themselves of private conveyances, and of franking by postmasters, members of Congress, and officers of the government. So long as the franking privilege exists, it can not be better employed than in the cause of agriculture. Political documents are franked by the *ton*; may we not then ask the same privilege for a few pounds weight of those relating to agriculture. All letters addressed to us as *Editor*, and sent by Express, from courtesy to the profession, go free.

7. Always leave a place for the seal, otherwise a word or two important to the sense is lost, and an editor's ingenuity must be taxed to fill it up.

By following the above rules, correspondents will save us a great deal of trouble, and be much more certain of seeing their communications correctly printed.

Remittances.—We wish *invariably*, that our subscribers would remit through postmasters. If they enclose a dollar in a letter and pay single postage, the bill is detected in it by the office in this city, and then we are charged perhaps 25 cents more; and if the bill happen to be at discount, it makes it a losing business to send the paper for it. The aggregate of our losses in this way are very considerable, and we earnestly entreat all to make use of the franking privilege hereafter in their remittances, as the law allows.

TO MECHANICS—AGRICULTURAL IMPLEMENTS.—We are constantly in the receipt of orders for the purchase of different kinds of agricultural implements, and the venders of these will find it much to their interest to forward us cuts of the same, accompanied with brief descriptions, and stating their prices.

Credit Quotations.—We have been so frequently and so kindly noticed by the press in general, and find our brother editors such really *clever* fellows, both in the English and Yankee acceptation of the term, that it is with the greatest reluctance we ever call their attention to the slight omission of occasionally not giving credit when quoting from us.

"Wintering Sheep." The Mississippi Valley Farmer copies this from us into its February number without credit.

"New Method of Making Manure." The editor of the Raleigh N. C. Star makes the following cool observations: "We published the following some weeks ago, but having been called on by several friends for copies of the paper containing it, which we were unable to furnish, we concluded to republish it, and as the experiment can be made with little trouble or expense, we hope they will give it a fair trial and report the result for publication." It then copies the whole of the article which was published in our paper, page 164, Vol. II., by permission of the author, in advance, from the Farmers' Mine, without giving credit. This article is then copied into the Southern Cultivator, No. 4, Vol. II., crediting it to the Star.

"Superior Dutch Cheese." The Connecticut Farmers' Gazette sins in its March number by not giving us credit for this.

"Foreign Agricultural News." By way of parenthesis, we must say to our excellent friends of the Dollar Farmer, that those items copied into Feb. No., page 127, are not all taken literally by us from the Gardener's Chronicle, but mostly *condensed from pages of laborious reading*; we think, therefore, we ought to have credit for it. In addition to this, there are two little articles in the same number copied from us without credit; but when so much credit is given us in this paper we will say no more—'t is the printer's imp who makes all this mischief, so there is an end of our grumbling for this month.

Assembly Report of the Committee on Agriculture.—This report occupies only eight pages; but like everything else coming from Dr. Lee, the chairman of the committee on agriculture in the Assembly of New York, it is condensed and able. Dr. Lee has the faculty of saying a *great deal* in a *few words*, a quality which we wish was more cultivated by the politicians of our country. Buffalo may well be proud of its representative. We see that the Assembly has paid the committee the compliment of ordering *ten* times the usual number of these reports to be printed. Dr. Lee also introduced, some weeks since, a bill to establish an Agricultural College, but has not yet sent us a copy—we should be glad to receive one. We wish we had more room to notice his report; but a hundred things are already crowded out of this number of our paper which ought to have gone in.

A Second Edition of the American Agriculturist.—Although we struck off a large edition of the first three numbers of the present volume of this paper, they are already exhausted by our greatly-increased list of subscribers. We hope, therefore, those recently sending in their names will have patience, as we shall print a second edition of the back numbers in a few days, immediately after which those recently sending in their names will be supplied.

John Blount.—This celebrated horse has taken his stand for this season, at Mr. John Drew's stable, near the Union Course, Long Island. He is said to be an animal of great substance, and very compact and symmetrical. He was foaled March, 1837, and is by Marion, out of Maid of the Brook. He has been celebrated on the course, having once distanced Boston. His terms are $30 the season.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, MARCH 26, 1844.

ASHES, Pots,	per 100 lbs.	$4 56	to	$4 62
Pearls,	do.	5 06	"	5 12
BACON SIDES, Smoked,	per lb.	3½	"	4½
In pickle	do.	3	"	4
BALE ROPE	do.	6	"	9
BARK, Quercitron	per ton	22 00	"	23 00
BARLEY	per bush.	52	"	56
BEANS, White	do.	1 25	"	1 75
BEEF, Mess	per bbl.	5 88	"	7 00
Prime	do.	3 88	"	5 00
Smoked	per lb.	5½	"	7
Rounds, in pickle	do.	3	"	5
BEESWAX, Am. Yellow	do.	28	"	31
BOLT ROPE	do.	12	"	13
BRISTLES, American	do.	25	"	65
BUTTER, Table	do.	12	"	20
Shipping	do.	6	"	10
CANDLES, Mould, Tallow	do.	9	"	12
Sperm	do.	29	"	38
Stearic	do.	20	"	25
CHEESE	do.	4	"	7
CIDER BRANDY, Eastern	per gal.	35	"	40
Western	do.	28	"	35
CLOVER SEED	per lb.	9½	"	10½
COAL, Anthracite	2000 lbs.	5 00	"	5 50
Sidney and Pictou	per chal.	5 75	"	6 25
CORDAGE, American	per lb.	11	"	12
CORN, Northern	per bush.	48	"	50
Southern	do.	46	"	48
COTTON	per lb.	6½	"	11
COTTON BAGGING, Amer. hemp	per yard.	16	"	18
American Flax	do.	15	"	16
FEATHERS	per lb.	30	"	35
FLAX, American	do.	8	"	8½
FLAX SEED, rough	per 7 bush.	9 00	"	9 75
clean	do.	10 00	"	11 00
FLOUR, Northern and Western	per bbl.	4 75	"	5 00
Fancy	do.	5 25	"	5 50
Southern	per bbl.	4 75	"	5 00
Richmond City Mills	do.	6 00	"	6 25
Rye	do.	3 25	"	3 50
HAMS, Smoked	per lb.	5	"	10
Pickled	do.	4	"	7
HAY	per 100 lbs.	40	"	45
HIDES, Dry Southern	per lb.	9	"	11
HEMP, Russia, clean	per ton.	180 00	"	185 00
American, water-rotted	do.	140 00	"	180 00
do dew-rotted	do.	90 00	"	140 00
HOPS	per lb.	7	"	9
HORNS	per 100	1 25	"	5 00
LARD	per lb.	5½	"	7½
LEAD	do.	3½	"	4
Sheet and bar	do.	4	"	4½
MEAL, Corn	per bbl.	2 12	"	2 68
Corn	per hhd.	12 00	"	12 50
MOLASSES, New Orleans	per gal.	30	"	32
MUSTARD, American	per lb.	16	"	31
OATS, Northern	per bush.	32	"	34
Southern	do.	28	"	30
OIL, Linseed, American	per gal.	83	"	87
Castor	do.	90	"	95
Lard	do.	60	"	65
OIL CAKE	per 100 lbs.	1 00	"	— —
PEAS, Field.	per bush.	1 25	"	— —
PITCH	per bbl.	1 12½	"	1 37
PLASTER OF PARIS	per ton.	2 00	"	2 25
Ground, in bbls	per cwt.	50	"	— —
PORK, Mess	per bbl.	8 75	"	10 00
Prime	do.	7 00	"	8 00
RICE	per 100 lbs.	2 37	"	3 00
ROSIN	per bbl.	60	"	85
RYE	per bush.	65	"	68
SALT	per sack	1 25	"	1 50
SHOULDERS, Smoked	per lb.	4	"	6
Pickled	do.	3	"	4
SPIRITS TURPENTINE, Southern	per gal.	34	"	35
SUGAR, New Orleans	per lb.	5	"	8
SUMAC, American	per ton	25 00	"	27 50
TALLOW	per lb.	6	"	7½
TAR	per bbl.	1 25	"	1 50
TIMOTHY SEED	per 7 bush.	13 00	"	15 50
TOBACCO	per lb.	3	"	6½
TURPENTINE	per bbl.	2 25	"	2 62
WHEAT, Western	per bush.	1 00	"	1 07
Southern	do.	90	"	1 00
WHISKEY, American	per gal.	23	"	25
WOOL, Saxony	per lb.	35	"	50
Merino	do.	35	"	40
Half-blood	do.	25	"	30
Common	3do.	20	"	25

New York Cattle Market—March 25.

At market, 1000 Beef Cattle, (700 from the south,) 110 Cows and Calves, and 570 Sheep and Lambs.

PRICES.—*Beef Cattle* dull, and prices obtained with difficulty. We quote $4.50 *a* $5.25, to $5.50, *a* $6, with a few extra at $6.25 *a* $6.50—300 unsold.

Cows and Calves.—All sold at $12 *a* $26.

Sheep.—The market cleared at $2 *a* $5, as in quality.

Hay.—Supply large at 62½ *a* 68 cts. per cwt. loose.

REMARKS.—*Ashes* are in steady demand for exportation. *Cotton* has fallen about ½ cent per lb. since the arrival of the Caledonia. Export from the United States since 1st September last, 520,050 bales; same time last year, 1,143,619; same time year before, 748,421. *Flour* and *Meal* are firm, and a limited stock on hand. *Grain* of all kinds the same. *Hay* a large stock on hand, and dull sales. *Hemp* in good demand. *Molasses* and *Sugar*, the same. *Naval Stores*, in fair request. *Beef* and *Pork* of the better qualities, brisk—the receipts are large. *Rice*, dull. *Seeds*, especially clover, active and firm. *Tobacco*, dull. *Wool*, quiet. In other articles the change is so trifling, that they call for no particular remark.

Money is 4 to 5 per cent. on good paper; on bond and mortgage in the city 5 to 6 per cent., out of it, 7 per cent. It is now more in demand.

Stocks have fluctuated some the past month, owing to the supposed treaty with Texas; they are at present on the rise.

Real Estate, we notice increased sales at improved prices; a good deal of building is now going on in the city and its vicinity.

Business generally is very active, and opens unusually early.

The weather has been uncommonly fine and warm during March, and the season very forward. We fear there may be a change in April for the worse.

TO CORRESPONDENTS.—Communications the past month have been received from Leonard D. Clift, E. Carpenter, Alexander McDonald, Jno. M. C. Valk, T. C. Peters, A. Buckeye, J. H. Lyman, Henry Chorley, A Northern Farmer, Samuel F. Christion, and Henry O'Reilly, Secretary of the New York State Agricultural Society, to whom we tender our thanks, for his polite invitation to be present at the executive committee meetings. Both Mr. O'R. and the society may think themselves slighted by our not yet publishing his communications, and the list of premiums, &c.; but the delay has been unavoidable. We go so early in the month to press, that we did not receive these in time for Feb. No., and our March and April columns were then bespoke for articles, which to have delayed, would have placed them out of season. We shall insert the State Society List, &c., in our next, and all other communications that we possibly can, without entrenching on other departments of the paper, which to ensure interest and variety to our periodical, we must not give up. We hope our correspondents will be patient, they shall see themselves in print in due course. To make room for these we have again thrown out several editorials which ought to have had place ere this.

A. B. will be answered by an article on White Beans in our next. It was written for this number but crowded out.

W. T. We have been unable to procure the Silver Fir seed yet, notwithstanding the repeated promises of two seedsmen that we should not be disappointed this year.

ACKNOWLEDGMENTS.—To John A. Grimes of Harrodsburg, Ky., and Samuel F. Christion of Holley Springs, Miss., for beautiful samples of Saxony and Merino wool, showing that this staple article can be grown to great perfection both in the south and southwest.

PRINCE'S LINNÆAN GARDEN AND NURSERIES.

The new Descriptive Catalogues of this establishment, comprising above 1000 varieties found in no other collection in America, and at very reduced prices, will be sent gratis to every *post paid* applicant, or may be obtained at 23 Pine street, New York. All orders are executed with despatch and in a superior style, and we guaranty the satisfaction of purchasers.

WM. R. PRINCE & CO.

Flushing, March 18th, 1844. *2t

ANALYSIS OF SOILS.

The subscriber having been called upon by the Farmers' Club of the city of New York to undertake the analysis of soils for agricultural purposes, has engaged to do so on the following terms:—

For the solution of simple questions, as to the presence or absence of lime, common salt, or gypsum in the soil, $2.

For the determination of the presence of bone, earth, potash, and the more difficult questions, $5.

Specimens of surface-soil, weighing 4 lbs., should be sent to the office of the American Agriculturist for the subscriber, a letter being forwarded at the same time to Dr. Gardner, 683 Broadway, with a remittance. Charges upon both must be paid.

D. P. GARDNER, M. D.

New York, April, 1844.

PREMIUM EAGLE PLOWS.

MANUFACTURED BY

RUGGLES, NOURSE, & MASON,

And for sale at the Manufactory in Worcester, and at their AGRICULTURAL WAREHOUSE and SEED STORE, Quincy Hall, Boston.

A full investigation and trial of plows was had in October, 1843, (occupying several days,) by an able committee of the Essex Agricultural Society, when 17 plows were presented. The committee in their report say, "in testing the quality of a plow, the *power* by which it is moved, the *ease* with which it is handled, and the *manner* in which it completes the work, are *prominent* points for consideration;" and in speaking of the Eagle Plow, to which they unanimously awarded the highest premium, they say, "As near as we can ascertain, this plow combines all the good qualities manifested in either of the others, with some peculiar to itself;" and "further, our attention was particularly called to the *quality* of the castings on the plows of Ruggles & Co., their *finish* and *durability*." "Their appearance certainly is more perfect than anything we have elsewhere seen." "The process of *chilling* the *points*, the entire *edge* of the *share*, and *flange* or *base* of the *land-side*, give a permanence and durability to the work that render it of a decidedly superior character." "And we think there is no hazard in saying the value of the parts thus made, is more than doubled by the process."

At the Plowing-Matches held in Massachusetts the same year, forty-three premiums were awarded to plowmen using plows made by R., N., & M., twelve of which were the highest premiums awarded in the counties of Essex, Middlesex, Worcester, Plymouth, and Bristol.

SUBSOIL PLOWS.

Among their great variety of kinds and sizes of plows, they have several sizes of SUBSOIL PLOWS, made in form like a genuine sub-soil plow *imported* by *them* from Scotland. They have been thoroughly tested, with great satisfaction, as the increasing demand from all sections of the country testifies. The New York State Agricultural Society in September, 1843, awarded their first premium to the subsoil plow made by R., N., & M., (*entered by Benj. F. Smith of Syracuse.*) Prices, $6, $8, $10, $12, and $15.

Also, a variety of plows particularly adapted to the culture of Cotton, Rice, Tobacco, &c., in the southern states, equal in style and quality to those used in this section of the country.

At their Warehouse may be found the most extensive and complete assortment of AGRICULTURAL and HORTICULTURAL IMPLEMENTS to be found in the United States, embracing every tool used in the cultivation of the farm and garden. Also, a large and well-selected assortment of Field, Grass, Garden, and FLOWER SEEDS, all of which are offered at wholesale or retail, at prices which can not fail to suit the purchaser.

The Editor of this paper will take orders for the above plows.

SULPHATE OF SODA.

A maker of Sulphate of Soda has requested me to offer the article, fine-ground, at about one cent per pound. Any farmer, desirous of trying the article, can obtain a supply by calling at 34 Cliff street, N. Y. Extracts from Professor Johnston's work on Chemical Manures, as to the value of this sulphate, will appear in May number of the American Agriculturist.

2t WM. PARTRIDGE.

WOBURN HOGS.

For sale, a few of the celebrated Woburn or Bedford breed of Hogs, comfortably caged and delivered in New York at the following prices, viz: One Boar eleven months old, $25; three Boars, five months old, $17 each; four Sows five months old, $15 each; a few pair of spring Pigs, $25, delivered 1st of June next. Address the subscriber at New Haven, Ct. WM. K. TOWNSEND.

March 19th, 1844. 2t

LIME FOR SALE CHEAP.

The subscriber will take orders for delivering lime in any quantity, on board vessel, just above Stoney Point, on the Hudson River, at 3 cents per bushel. Samples, and an analysis of it by an eminent geologist, can be seen by calling at his office. One great object in putting the price so low, is to introduce the use of it as a manure more extensively among our farmers.

OYSTER-SHELL LIME.

Will be furnished in this city at the kilns, at 4 cents a bushel.

PLASTER OF PARIS

Ground, and put up in barrels of 350 lbs. each, at $1,25 per barrel. This is an excellent fertilizer, easily transported, and well worthy the attention of Southern Planters. All orders should be post paid and accompanied with the money.

A. B. ALLEN, 205 Broadway, N. Y.

COMMERCIAL GARDEN AND NURSERY OF PARSONS & CO.

FLUSHING, NEAR NEW YORK.

Descriptive Catalogues of all the Trees, Shrubs, and Plants cultivated at this establishment, are recently from the press, in a new and improved form, and can be obtained gratis by application to the proprietors by mail, *post paid*, of Parsons, Lawrence, & Co., 129 Pearl street, New York, and the editor of the American Agr.

THE FRUIT DEPARTMENT comprises all the finest varieties of Apples, Pears, Cherries, Plums, Peaches, Nectarines, Apricots, Grapes, Figs, Quinces, Mulberries, Persimmons, Papaws, Medlars, Walnuts, Currants, Raspberries, Strawberries, Gooseberries, Barberries, Cranberries, Esculent Roots, &c., of superior size and quality, and will be furnished by the quantity at reduced prices.

THE ORNAMENTAL DEPARTMENT includes the different varieties of Maple, Ash, Horse-chestnut, Poplars, Oaks, Lindens, Elms, Beech, Magnolias, Mountain-Ash, Pines, Firs, and a large collection of all the known hardy deciduous and evergreen trees, among which are the Chinese Ailanthus, Silver-leaved Abéle, European Larch, Tulip Tree, Pride of India, Judas Tree, White Fringe Tree, Flowering-Ash, Chinese Koolruteria, Venetian Sumac, Balsam Fir, White Spruce, Arbor Vitæ, &c.; 10,000 Norway Spruce of small size will be furnished at reduced prices.

It also includes a large collection of Ornamental and Flowering Shrubs, Vines, Creepers, Honeysuckles, Azaleas, Pæonies, Hyacinths, Crocus, and other bulbs, with a numerous list of Herbaceous Plants and Roses. Their importations of the past season comprise many new kinds of Shrubs, and Hardy and China Roses, and some new varieties of the Tree Pæony never before introduced to this country. The Tree Roses are very thrifty, and include the finest varieties. They have not yet tested the hardiness of the Paulownia Imperialis and Cedrus Deodara, but hope soon to be able to recommend both these beautiful trees for general cultivation. A great advantage possessed by the Trees cultivated at Flushing, is their peculiar hardihood. From the fact that the Nurseries are freely exposed to all the winds from the ocean on the one side, and Long Island Sound on the other, accompanied by the advantage of being sufficiently far north to acclimate the trees to any section of the country, they acquire a degree of hardihood which renders them eligible for removal to colder latitudes, and enables them to support the rigors of even a Canadian winter. Trees thus hardened by nature, are found not only to endure with safety the climate of those parts of New England where the winters are uniformly severe, but also to succeed well in the more temperate climates of the south.

Orders sent to the proprietors by mail, or left at 129 Pearl street, New York, will receive prompt attention.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

CONTENTS OF APRIL NUMBER.

EDITORIAL. Page.

Downing's Highland Nursery, - - - - - - - - 97
Guano Manure, - - - - - - - - - - - 98
Death of Mr. H. D. Grove,
New York Farmers' Club,
Subsoil and other Plows, - - - - - - 100
Foreign Agricultural News, - - - - - - - 124
Editor's Table, - - - - - - - - - - 125
Review of the Market,
To Correspondents, - - - - - - - - - 127

ORIGINAL CORRESPONDENCE.

The Silk Culture, J. R. Barbour, - - - - - - - 101
Paular Merinos No. 3, Examiner, - - - - - - 102
Virginia Lands, H. D. X.,
Fruit Trees, Benjamin Hodge, - - - - - - . 104
The Strawberry, T. R. R., - - - - - - - - 105
Exportation of Fruit, B. G. Boswell, - - - - - - 106
English Method of Fattening Cattle, Dendy Sharwood, - 107
Charcoal and its Uses, Robert L. Pell, - - - - - 108
Tanning on the Plantation, Philip Winfree, - - - 109
Tree Dahlia, H. Meigs,
Farm of Mr. Franklin Morgan, A Traveller, - - 110
Agricultural Implements for the South, John Nelson, - 111
Draining Land, Cornelius Baker, - - - - - - - 112
A Farmer's Education, Thomas Addis Emmet, - - - 114
Cultivation of Fruit, B. G. Boswell, - - - - - 116
Georgia Lands and Agriculture, Garnett Andrews, - - 117
The English Oak in America, Wm. R. Prince,
Plaster Near Salt-Water, T. W. Coit,
Errors Corrected in the Report of Mr. Pell's
Experimental Farming, H. Meigs, - - 119
Lime as Manure, Wm. A. Norwood,
Choice Fruit, B. G. Boswell, - - - - 120
Southern Calendar for April, - - - - - - - - 122
Northern do. do. - - - - - - - - 123

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. III. NEW YORK, MAY, 1844. NO. V.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

STEEPING SEEDS BEFORE SOWING

It is frequently of great benefit to use a steep for certain seeds before planting. A solution of saltpetre is one of the most valuable for this purpose. By saturating the seed with this salt, a quick and rapid growth is given to the young plant, which brings it to a much earlier and greater maturity than would be otherwise secured. It is also a preventive against the ravages of insects, protecting the young vegetable till it reaches a sufficient growth to resist their injurious effects in a great manner. For turnep-seed, soaking in tanner's oil is an excellent preventive against the attack of the fly, besides yielding nutriment to the plant, by which it more speedily gets beyond its fatal influence.

CULTURE OF FLAX.

We are surprised that our farmers do not turn their attention more to the cultivation of flax. This is a crop easily raised, and when properly managed, a very productive one. It is somewhat exhausting when its seed is permitted to come to full maturity, as is the general practice in this country. But we can not expect to make our cake without dough, and when we get a large crop of seed, we get a full equivalent for the exhaustion. When raised as it usually is in Ireland, where large crops are cultivated, and pulled before the seed ripens, so as to secure a more delicate fibre for the best qualities of linen, it is not exhausting. Our practice, owing to the coarser fabrics we manufacture from it, is to secure both fibre and seed, which, for our purposes, is undoubtedly the most profitable. The seed is one of the most, perhaps, decidedly the most nutritious that can be given to stock, when boiled or soaked in hot water for a sufficient time. As an article of commerce, it is quite an object to raise, yet when carried off the land for consumption, it will be necessary to use manures plentifully, to keep it in proper condition.

But one of the great advantages to be derived from this crop, is, the employment which getting it out gives to the men and boys, and to the women and children in spinning and weaving in winter, when they have little else to do, and for the want of which, they are too frequently idle, or something worse. As a means for the improvement and preservation of industrious economical habits, it is of great value, independent of its profit as a field-crop. About 400 pounds of flax, and 12 bushels of seed is a fair crop from an acre. The flax is worth 8 to 10 cents per lb. in this market; the seed $1,40 to $1,60 per bushel.

FARM OF MR. GIBBONS.

This farm consists of about 600 acres in one body, and is situated in the town of Madison, Morris county, New Jersey, 25 miles west of this city, and can be approached in two hours by the Morristown railroad. The soil, generally, is of a sandy or light gravelly character, though some parts of it may more properly be characterized as a loam. In order to ensure a more perfect management, the farm is divided into three sections of about 200 acres each; the first 200 being reserved by its opulent owner for his private grounds around the mansion, and the remaining 400 are nearly equally distributed between two tenants, each with its own independent set of buildings.

This farm was in a very low state when purchased by Mr. Gibbons a few years since, or to use a more common phrase, nearly run out. His improvements upon it have been gradual, and are still *progressive*, as he modestly says he has much to learn, and considers as yet that he has just begun. It is not necessary for us to go into minute particulars in describing the management of this farm, suffice it to say, the rotation of crops is such as is practised by the most enlightened system of New Jersey; that all the manure is carefully husbanded and applied; lime, and other foreign fertilizers, are added when it is considered necessary, and the land is already restored to such a state of fertility as to produce the most bountiful crops.

Stock.—Mr. Gibbons has for some time more particularly devoted his farm to the raising of improved stock; and of this, his chief delight seems at present to centre in Durham cattle, and blood-horses. For the foundation of the former, he commenced by importing direct from England, two bulls and a few choice cows, which were selected for him with much care by a friend then travelling abroad. These he has continued to breed with attention since their arrival here, and he has now surrounding him a very pretty herd. Among them we greatly admired Fortune, 6 years old, out of the imported cow Volage. She is of a rich roan color, of good size in a small compass, handles well, is fine in her points, carries a superb brisket, and has proved herself, in accordance with her name, quite a *fortune* to her owner, having already produced him in the shape of three beautiful heifers, the three great virtues of Faith, Hope, and Charity. Faith is a rangy, fashionable animal, and already the dam of a pair of handsome twin heifers. Hope is a gem in her way, in shape like her dam, and holds forth much promise, which we may safely trust will not be disappointed. As for Charity, she is not sufficiently grown yet to give an opinion upon her merits, and we can only add, that we shall expect her, at a proper age, to *charitably* commence breeding, and continue favoring her owner every year thereafter, till well in her teens, with a handsome image of herself. Moonbeam is a superb 3-year old, much like Fortune in shape and other qualities. She indicates good milking properties, and has a perfect bag; the teats in their position forming an exact square and slightly pointing out.

Of the bulls, upon the whole, we liked Majestic best. He is (2249) in the Herd-Book, and was the first one imported. He is heavy and compact, with a good brisket and quarter, and these are the animals to our taste. Arthur, the second importation, is long and rangy, and may, perhaps, be the most popular with the public. Zero, 4 years old, by Majestic, out of Volage, is a noble animal; fine in the head, and possesses many other good qualities. In addition to these, Mr. Gibbons has several other thorough-breds, and quite a herd of high grades, both here and at another farm in Elizabethtown; good milkers, especially for quality, making most excellent family cows.

His bulls he more generally transfers when quite young, and in the autumn, to his rice plantations, near Savannah, Georgia; where, after undergoing the process of acclimating, he disposes of them to the planters for the purpose of improving the southern stock. This is an excellent plan, and cattle stock are much more likely to do well taken from the middle states to the south; when imported direct from the cool, moist climate of England, they are sure to die, or become utterly worthless for breeding. It is the same also with sheep; horses and swine do better. We contend with Mr. Gibbons that acclimation should be gradual.

Of the horses we shall speak at length in a communication we intend for the Spirit of the Times, that being a more proper periodical for the discussion of the merits of thorough-breds than our limited farm journal. We may however say, *en passant*, that in this department Mr. Gibbons at present stands at the head, and with his unconquerable Fashion, and several other animals equally promising, he may safely challenge the Union. His breeding-stud is large, the grounds for it very appropriate, and the stables, sheds, and paddocks, without being expensive, are more perfectly and commodiously arranged than we have elsewhere seen in the United States. Yet, notwithstanding their high breeding, there are several animals here, that we are confident would greatly improve our roadsters by crossing on the common stock of the country. Mariner, for example, although only 15 hands high, strikes us as being a horse of very great substance in that compact form, and put to roomy mares, we are confident the produce would have size enough. He is a singular thorough-bred, and deserving a minute description, even in a strictly agricultural paper.

In form he is a complete Arabian. His head is fine, with small ears, broad forehead, eyes like a deer, and large open nostril; mane and neck fine, the latter beautifully arched; chest full and deep; back short and strong; body well ribbed up, long under the belly, and round like a barrel; quarters in proportion to those of an English cart-horse, full, round, and superbly developed; tail well set on, and when moving, carried with a graceful curve; hind legs straight, fine, and muscular; the joints of the fore legs very strong, and short from the knee down; the pasterns shorter and stronger than is usual with racers; and the hoof clear, tough, and open. His color is of the very best kind, and denotes endurance, being brown with a tanned muzzle. His action either in walking, trotting, or galloping, very fine; and as for game and endurance, few could ever run with him—his *two* usually being his *best*. Added to all this his temper is pretty good, and he is easily kept. Mr. Gibbons thinks very highly of this horse, and is now breeding to him exclusively. We wish for the sake of the country, that a dozen good roomy roadster mares could be put to him in order to test the produce; for farm and carriage-horses, we are persuaded the stock would be all that could be desired. The pedigree of Mariner is of the very best kind; all his family having been celebrated for great endurance, strength, and speed. Shadow is also a splendid animal, three inches taller than Mariner, and both him and the bull Zero, Mr. Gibbons allowed to stand last year, and will do the same the present season, at a moderate price, at Morristown. We really hope the farmers of that vicinity will avail themselves of this liberality on the part of their owner, and make good use of these valuable animals.

Some of the mares in this stud we are confident would also prove admirable roadsters, particularly Jemima Wilkinson, Magpie, and Ornament. We trust that the lovers of the turf will not think we are undervaluing the thorough-breds by such observations, as it is well known that we are a *strict utilitarian*, and no sportsman; and yet we will yield to none in admiration of the horse, and to show that we are not niggardly in our praise, we ask what can be finer than Fairy, by Henry, and her pretty yearling filly?

The Mansion.—The grounds attached to the mansion consist of about 200 acres, and are a part as before observed, of the solid body of the farm. A high stone wall handsomely faced on both sides, capped and pointed, encloses this part of the domain in front for some distance along the road, and on the division line. The approach to the house is through a high iron gate, on either side of which is a handsome stone lodge in the castellated Gothic style. It stands at a suitable distance from the road, on rising ground, in the edge of a forest of 60 acres. It is quite imposing, of Grecian architecture, 130 feet front, 80 feet deep through the centre, and has a conservatory attached to it 80 feet in length, 20 high, and 20 wide. There is sufficient ground cleared up immediately about it for a flower-garden and ornamental shrubbery, and avenues are cut through the forest in various directions, in order to command views of the adjacent country, which is varied and picturesque to a wide extent around. The stables are about 20 rods from the house, and screened by a belt of the forest. They are of brick, in handsome style, and have every possible convenience of carriage, harness, and tool-house, grain-bins, hay-lofts, stalls, racks, feeding-troughs, and water; indeed, we think them as well as one of the farm barns, excellent models which would be well worth studying by any one desirous of building. We have certainly seen nothing more complete or convenient abroad; and yet all is done with due regard to the cost.

Kitchen Garden.—This is in front of the stables, contains about 2 acres, and is laid out in convenient squares, with turf walks. We think these much cleaner and better than gravel, and noticed that they were becoming quite common in England, especially in heavy soils. Mr. Gibbons is paying much attention to fruit, and his espaliers struck us as particularly healthy and thriving. He cultivates the strawberry in a different manner than we have ever before seen it. The soil being sandy, it is subject to drought and burning. His object is to obtain coolness and moisture. After properly preparing the beds, he leaves at every length of the bricks, and three widths of them, an open space of three inches square for the plant, which makes them stand in the bed 9 inches by 14 apart. The vines as they grow spread over the whole surface of brick, and the heat radiating from these ripens the fruit quicker and makes it sweeter than when grown on the ground; added to this, it is kept perfectly clean, and does not require washing when prepared for the table. Water greatly injures the flavor of the strawberry.

Mr. Gibbons has this year commenced an experiment with the gooseberry, with the view of preventing the mildew. He has planted the shrubs along the north side of a tight board-fence to which espaliers are trained, so that the sun can not shine upon them till past 2 o'clock. As the gooseberry perfects itself in the cool cloudy climate of England, it is reasonable to suppose that as much hot sun as we have in our own country must prove injurious to it. The finest gooseberries we have seen in the United States grew in a cold clay soil, on the banks of the Niagara river, at the foot of Lake Erie, where the summer climate is delightfully cool, and more moist than in the eastern sections of the country.

In improving his large landed property, introducing fine stock on to it, and extensive building, Mr. Gibbons is doing great good in his neighborhood, and his example is worthy of all praise. In our visit to his farm, we had noted many other things of which it was our purpose to speak; but the length to which we have already extended this article, admonishes us to draw it to a close.

Such part of Morris county as we saw we were highly pleased with; we found it, generally, under a high state of cultivation, and many creditable farms in it. Among other things there, considerable attention is paid to the culture of the peach, and indeed most species of northern fruits, this city being an excellent market for all such things.

CULTURE OF THE FIELD-BEAN.

It has often been a matter of regret with us that the common field white bean is not more extensively cultivated, especially in the eastern states. It produces bountifully, and pays better for the labor bestowed upon it than any other crop on light poor soils. Baked or boiled it is a favorite dish at the table; it is also most excellent feed for stock, especially sheep. We estimate this humble little vegetable highly; and if the following hints serve in the least to extend its culture, we shall feel amply repaid for writing this article.

Soil.—The bean will grow well in any soil, from the stiffest clay to the loosest sand; but in our experience of its culture we have found that of a light gravel, abounding somewhat with stone, suit it best. In a clay soil the bean does not ripen so well or show so pure a white, and it is somewhat subject to mould and rot; in rich loams it runs too much to vine; and in light shifting sands its growth is small and somewhat parched.

PREPARATION.—We are supposing the soil a hard poor gravel: in this case it is customary to plow about 3 inches deep; but as the bean sends out innumerable fine roots from its main stem, it is important to have the ground loose and mellow to a greater depth, and yet keep the most fertile part of it on the top. If, then, the labor can be spared, and it be not too expensive, we would recommend that the surface-plow be followed by the smaller kind of subsoil-plow, stirring the ground 6 inches deeper, thus making the two plowings at least 9 inches in depth.

MANURE.—A very favorite manure for a bean crop in some parts of Massachusetts is chip-dung; but composts of most any kind answer very well, especially those in which muck predominates. Lime, ashes, charcoal, and plaster, are more or less beneficial as a top-dressing. Long manure fresh from the barn-yard is rather too rank, and is apt to make the beans run too much to vine; but this depends something upon the soil to which it is applied. Whatever fertilizing materials, however, are made use of, if the land be very poor and rough, and it is not particularly wished to improve it for a succeeding crop, we would recommend that they should be used for manuring in the hill; otherwise be spread broadcast upon the land directly after plowing, then well incorporated with the soil by harrowing. Thus prepared, the ground should be planted as soon as possible.

SEED.—The best kind of field-bean, is of small size, plump, round, and slightly oblong in shape and of a white color. It is common in the eastern states, and one of the finest samples of it which we have seen, is now being distributed over the country by that indefatigable friend of agriculture, the Hon. H. L. Ellsworth, Commissioner of the Patent Office.

PLANTING.—For this purpose, some prefer throwing the field into ridges; but this should only be resorted to when the soil is stiff, or possesses a superabundant moisture; in every other case, planting on a level surface is best. Drills 2½ to 3 feet apart is the favorite method of planting with those who are desirous of making the most of their ground; hills 2½ to 3 feet distant each way answer nearly as well; some sow broad-cast, but when this is done, no after-culture can follow, and the crop is liable to be lessened by the growth of weeds, and the land is left in a foul state. Beans are frequently grown among corn, being planted between each hill at the second time of hoeing. The crop under these circumstances is small; it takes also from that of the corn, and it may be considered upon the whole, as scarcely paying for the extra trouble of culture. It is customary to plant beans after corn and potatoes are got in. The first week in June is quite early enough in this climate, farther north the last of May is perhaps better: it grows quick, and we have seen first rate crops gathered from plantings as late as the 15th of June, in the latitude of 42°. The quantity of seed usually allowed per acre, in hills, is one bushel; in drills, it would require a little more; broad-cast, at least two bushels. Yet this will depend something upon the size of the bean used, and the economy in dropping the seed. Six to seven beans should be dropped in each hill, and four or five stocks be left to bear; in drills drop the seed every two or three inches, and leave a plant every four to six inches. When planted in hills, the field may be checked out by a light one-horse plow as for corn, then drop the seed by hand, and cover with a hoe or shovel-plow; for drills run the plow about two inches deep, then drop as above, or from a long necked bottle, or a tin cup with a hole in the bottom and a handle attached to it, slightly shaking the cup or bottle as the person dropping walks along. Children are best for this kind of work, as they are not obliged to stoop as much as men, and they will do it quite as rapidly and well. After dropping cover about two inches deep with the hoe, or turn back the furrow with the plow. When this is finished, it is best to pass a light roller over the ground. For drill-planting, there are various machines which answer as well for beans as for corn, but in stony ground, or a stiff soil, they do not cover well.

AFTER-CULTURE.—This is very simple, and only requires the cultivator to be passed up and down the rows at two or three different times during the season, for the purpose of keeping the weeds down and stirring the earth, followed by a slight hilling with the hoe or a light plow, throwing the dirt to the plants.

HARVESTING.—This should be done in dry weather as soon as the bean is well formed, and there is no danger of its moulding or shrinking; if left till touched by a hard frost, the pods are liable to crack open, and much waste ensues from their shelling. When sown broad-cast on smooth land, the most rapid way of harvesting is by mowing; when in hills or drills, especially in rough ground, it is customary to pull the vines by hand, which being light work, and demanding a good deal of stooping, may also, like the dropping of the seed, be performed by children. As the bean-vines are pulled they are thrown into small heaps, and sunned daily like hay. As soon as sufficiently dry, they should be taken to the barn, thrashed, and the straw stacked. We have never found it answer to stack beans before being thrashed; they have invariably become dark-colored or spotted, and in addition to this, we lost more or less by rot and mould. Mr. Solon Robinson, Vol. VIII. of the Cultivator, recommends the following method of curing beans on a clay soil in Indiana:—

"Take poles or stakes (common fence-stakes) into your bean-field, and set them stiff in the ground, at convenient distances apart, which experience will soon show you, and put a few sticks or stones around for a bottom, and then, as you pull an arm-full, take them to the stakes, and lay them around, the roots always to the stake, as high as you can reach, and tie the top course with a string, or a little straw, to prevent them from being blown off, and you will never complain again, that you can not raise beans, because they are too troublesome to save."

When situated something like Mr. Robinson, we have tried the plan recommended by him, and approve of it. Where there were no stones at hand we used small-chunks of wood in their place. In the more stony and silicious soils of the east, the stakes, &c., are unnecessary, beans will cure well enough on the bare ground. After being thrashed, the beans should be cleaned in the same manner that grain is, and then put into barrels or sacks and sent to market. The whiter they are in color, and the neater they appear, the quicker they sell, and the higher the price they bring.

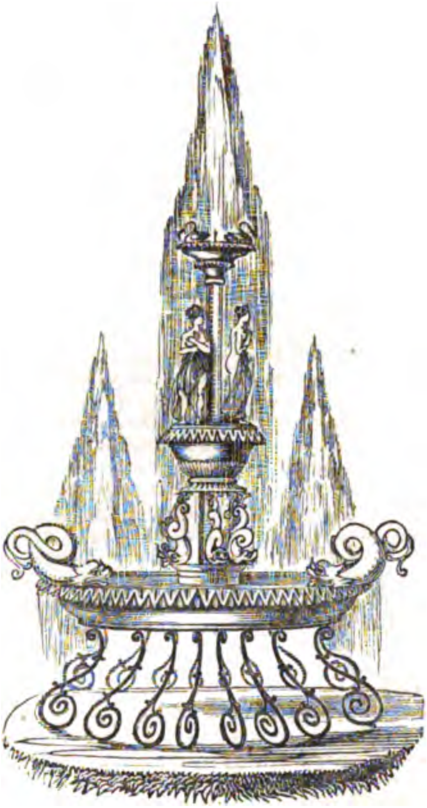
Product.—This varies greatly according to soil and cultivation. When planted with corn, 7 to 12 bushels is a fair yield per acre; when planted alone, 20 to 25 bushels. We are persuaded that, by subsoiling even the poorest gravel land, and only lightly top-dressing it with the proper kind of manure, from 30 to 35 bushels per acre may be counted upon as an average; and if so, beans would be a much more profitable crop than anything else which could be produced from it. The highest product which we have known taken from a single acre was 53 bushels, but we have heard of 60 bushels being raised.

Value.—White beans of a good quality, well cleaned, and neatly put up, usually bring from $1,00 to $1,75 per bushel in this market; and occasionally they are worth from $2,00 to $2,50. We do not recollect of their being less than $1,00 for years. The straw is valuable as food for sheep, and when properly cured they eat it with avidity. In a chemical analysis of beans, it is found they abound with a *greater quantity* of the *elements* of *wool* than any other grain or vegetable; to make sheep produce heavy fleeces, they are therefore particularly desirable as food, and such is their natural fondness for them, that they will eat them with avidity, whole or ground, even in a damaged state. To our store-flocks during the winter season we generally gave a pint of beans per head per day, and when we had not these, we fed peas, oats, and potatoes. Corn is good for *fatting* sheep, but not so valuable as beans, peas, oats, and most other kinds of grain, for the production of wool.

DEATH OF WILLIS GAYLORD, ESQ.

It is with unfeigned regret, that we learn of the sudden death of Mr. Gaylord on the 27th March, at his residence, Limerock Farm, Onondaga county, after an illness of only 33 hours. Mr. Gaylord has long been known to the public through his agricultural and other writings, and as the senior editor of the Genesee Farmer, and since Judge Buel's death, of the Albany Cultivator. He is a great loss to the agricultural community, and his place can not be easily supplied. We learn that he was constitutionally delicate in his health, and has long been an invalid; but his demise in the flower of his age, notwithstanding this, was very unexpected, and has strongly awoke the sympathy of the public mind. We hoped to have been able to give a brief biography of Mr. Gaylord in this number of our journal, but understand a relative has taken possession of all his papers with a view of bringing it out in full himself, till which time the public must look to other sources for it.

A Fountain, Fig. 27.



Since the introduction of Croton water into New York, the city has been ornamented with several public fountains, an engraving and description of one of which, throwing the water over 60 feet high, we gave in our 2d vol., page 8. In the front and rear yards of many of the private houses, fountains are also introduced, which are not only ornamental to the city, but conducive to the pleasures and health of its inhabitants. We give, above, a cut of one of this description which we think quite pretty. It is of cast-iron entirely, and manufactured by D. L. Farnam, at 247 Water street.

Manure of Fowls.—We regret to see so little attention paid to the saving of pigeon and hen-dung. The manure of any kind of birds is extremely valuable, especially for growing melons, or indeed vine-crops of any kind. Cucumbers, squash, pumpkins, and especially melons, grown from hen or pigeon-dung, are said to be sweeter and more delicate than those produced from any other kind of manure whatever. Guano, for this reason, is very valuable for manuring vines.

AGRICULTURAL ERRORS.

An Essay read before the Natural History Department of the Brooklyn Institute, March 6th, 1844.

In the early development of a new science or in the recent application of an established science to any new art, terms are used and notions entertained by its votaries, which retard its progress and must be swept away before any permanent improvement can be made, or any general benefit be derived by its application.

It is but a few years since the science of chemistry was applied to agriculture, and its progress has already been much retarded by the introduction of crude notions and indefinite terms. Not long since all their talk was of *humus*. I sought for an explanation from writers and speakers, but none of them had a definite idea of its meaning, every one giving a different explanation. I therefore consider it on a par with the term phlogiston, so glibly used by chemists within my recollection, that thousands talked about, but no one could clearly explain. Fortunately for the progress of that science, the *French school* swept from the board all unmeaning terms and opinions, and substituted such as were strictly scientific and readily understood by practical operators. It would tend much to the advancement of agriculture if some influential savans would undertake to make a correct nomenclature of agricultural terms, and sweep away useless notions, adopting such only as would convey to the mind definite meanings. I was led into noticing this subject by an article in the Cultivator for February of this year, where a writer in describing ammonia as found in nature merely gives two of its component parts, nitrogen and hydrogen as constituting its fertilizing power. Now it is well known that nitrogen and hydrogen afford a very minor portion of vegetable matter, only about one quarter; whereas the carbonic gas, always combined with free ammonia, furnishes it with nearly seventy-five per cent., yet the writer never mentions this important portion. Besides, too much nitrogen is destructive to vegetation, a fact well known by those who make nitrate of soda in South America, for on such soils no vegetation of any kind will grow. The same article when collected in a condensed state is used in Europe as one of their best fertilizers, at the rate of not more than 120 pounds to the acre, but when used in excess will destroy the crop. It appears when used in excess to be too stimulating. To furnish vegetation therefore with too much nitrogen, is in its operative effect like unto a man drinking too much alcohol, its stimulative power destroys life. No such effect has ever been noticed in other carbonates, even where the soil has contained over ninety per cent. of carbonated calcareous matter.

I have lately had several applications from agricultural societies for estimates of apparatus, agents and reagents for analyzing soils, and have heard much said at farmers' clubs on the same subject, but no one has suggested nor have I heard any one even hint at the utility of having an analysis of agricultural products as a leading desideratum. Now it is self-evident, that however expert an agriculturist may become in the analysis of soils and he remains ignorant of the component parts of the plant he intends to raise, that he will have acquired no knowledge that can be beneficial to him; for he will remain quite as much in the dark as before he knew anything of analysis. Some two or three years since I sent an essay to the Cultivator, offering to be one of a hundred to contribute thirty dollars each to procure an accurate analysis of such plants as are usually raised by our farmers, and proposed that tables of contents should be sent to all who wanted them. I also suggested that such analysis should be made in France, Germany, and England, with an interchange of tables among all these nations; with such tables any chemist would instantly understand what material would be required to add to a soil to raise any particular plant, either agricultural or horticultural.

The component parts of several plants have already been ascertained by analysis, and they are found to consist of from 84 to 92 per cent. of gaseous matter, and from 8 to 16 per cent. of solids. The gaseous portion is composed of carbon, oxygen, nitrogen, and hydrogen; the solid portion of fixed alkalies, silex, iron, &c. The varied properties of different vegetables are from all the various combinations of the four gases, together with the products so formed combining with the alkaline portion of the plants.

Sugar in plants is composed of oxygen, carbon, and hydrogen; oxalic acid in sorel and other plants is a compound of carbon and oxygen; malic acid in apples and other fruit, is composed of carbon, oxygen, and hydrogen; citric acid in the lemon and other fruit, is composed of carbon, oxygen, and hydrogen; the difference in all these consisting merely in the combinations varying in their proportions. Oxalates, malates, and citrates, will be formed by these acids combining with the alkaline portion of the plants. Vegetable gums are composed of carbon, hydrogen, and nitrogen; vegetable oils, of carbon, hydrogen, and oxygen. The bitter of the almond and of many other kernels, in the leaves of tree and plants, as well as in some varieties of fruit, is occasioned by the presence of cyanogen, which is composed of carbon and nitrogen, with a trace of hydrogen. This material when concentrated is a deadly poison.

Thus we perceive there is produced from four simple substances at the fiat of creative intelligence, a great variety of products, all necessary for sustaining life. I would advise our farmers, until something better offers, to persevere in the use of charcoal and lime, as these are to be obtained in any quantity and in most situations at a very trifling cost. The lime will supply carbon and oxygen to the plants during their growth, and the charcoal will take up and supply them with all the ammonia necessary to their full development without any over-supply. Charcoal will also afford to plants sufficient moisture during long droughts from its hydratic quality of saturating its pores, and from its great retentive power. It also lightens the soil, permitting the sun and air to penetrate to the roots of the plants, and letting all the rain percolate freely through it that is not required for its own saturation.

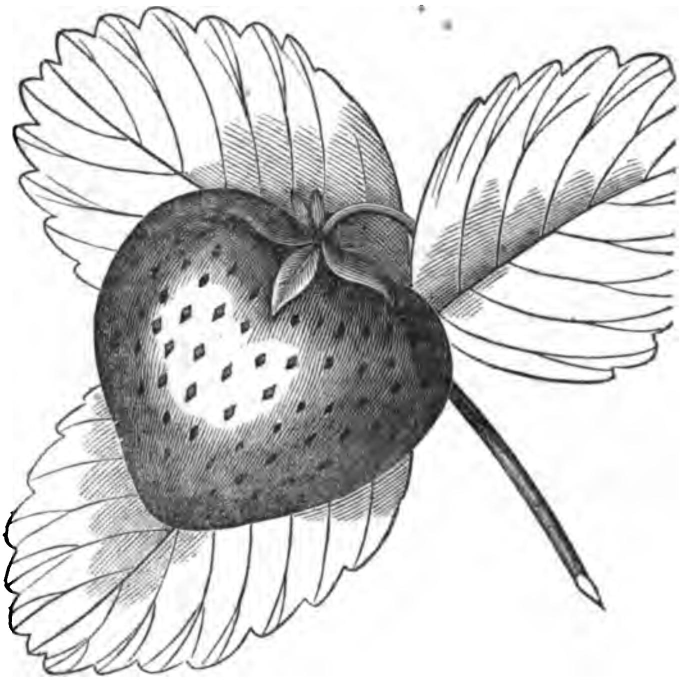
The foregoing remarks prove that agriculture, so far from being a mere business of drudgery and toil, is of all the arts known to man one of the most scientific and elevating, and that the sooner our farmers are educated up to their business the better for our country. The first and primary object should be an accurate analysis of all plants required for cultivation, including the elementary and solid portions of each variety. The second necessary step will be to issue tables of contents of all the known fertilizers, giving their component parts, and describing their effect on vegetation.

There may be some difficulty in persuading our *lawrocratic* legislature who have been educated at the expense of the farmer, to reciprocate the favor; but our farmers have only to will it, and they can command ample justice.

Wm. Partridge.

HOVEY'S STRAWBERRY.

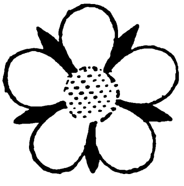
Herewith is a wood cut of Hovey's Seedling Strawberry, which may be depended on as perfectly exact. The leaf was transferred to the wood by an impression taken on paper from the real one. The berry was copied from that in Hovey's Magazine, and represents one of the largest size to which any have yet attained. Under ordinary cultivation many of them grow from three to four inches in circumference.



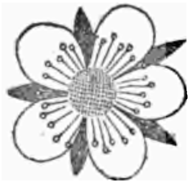
Hovey's Seedling Strawberry.—Fig. 28.

If any of your readers are desirous of seeing some of the largest size, they can be gratified by attending to the following directions. Take large, thrifty plants, first runners, and transplant them into a rich, deep soil, one foot apart each way; keep all the runners trimmed off, and the ground loose. The next season clip off all but two or three of the first blossoms on each plant, not forgetting to have a few plants of another variety (same class,) with staminate flowers, in their vicinity. To such as are not botanists, the following cuts may be of use.

Female Flower, Fig. 29.



Male Flower, Fig. 30.



Philetus Phillips.

Middletown Point, April 10th, 1844.

For further particulars regarding this superb strawberry see advertisement. Its culture is rapidly spreading, and we believe that it is considered, by amateurs, the best of all the large kinds grown in the United States. Mr. Hovey's success in producing this strawberry, shows the importance of paying greater attention to seedling fruits; we do not know why we should be so dependent on foreign countries for these things.

ENORMOUS EGG.

In the March number of your periodical under the head of Foreign Agricultural News, I noticed an account of an "enormous egg" laid by a goose in Quermore, near Lancaster, England, which measured 8¼ inches round, longitudinal circumference 10½ inches, and weighed 10 ounces. The size and weight of the goose is not stated—but I suppose she was a large one. Now, much as I am inclined to acknowledge the superiority of old England in most particulars, still, she is not the only country productive of great geese and large eggs.

Mr. Lewis G. Thurston, of Huntington, Long Island, owns a goose which laid an egg on the 4th of this month, which weighed 10½ ounces, longitudinal circumference 11¼ inches, and measured 8¾ inches round. Let all other American geese emulate the example here set before them. S.

New York, March 16, 1844.

SHEEP HUSBANDRY.—NO. 5.

Showing how the Saxon sheep were introduced into the United States; by which means the invaluable old Merino flocks (with which the country had been providentially supplied), were materially injured, and ultimately ruined and destroyed; a misfortune of incalculable extent and importance, whereby the country sustained immense loss and damage.

Other avocations and duties, have caused a much longer interval of time than I intended should elapse, between my last communication and the present. In the meantime, however, I have had the gratification of seeing your pages constantly and fully occupied with agreeable and highly instructive matter, probably more interesting to many of your readers, than anything I should have discoursed, so that I have felt assured of not being much missed from among your contributors, for a few months past.

In my last paper, published in your September number, I gave some account of the original introduction into this country, from France and Spain, of that invaluable breed of animals, the MERINO sheep; undoubtedly the most valuable and profitable race of sheep for *wool*-growing purposes which this country, *or the world*, has ever seen. After having there showed how and when we *obtained* them, I promised to show in my next when and how they were *lost;* and also afterward, to point out *how* they may be certainly, speedily, and cheaply *restored* to the country, in all their former excellence.

That the original blood, *has* been *lost*, in a great degree, and *to a universal extent*, throughout the whole United States, is a *fact*, which I presume is, unfortunately, too true and too universally *felt* and admitted, to require argument, or allow of doubt. After we became (as I have shown) perfectly established, between the years 1802 and 1812, in possession of the choicest and best sort of Merino sheep, they had hardly been allowed time enough to become well *acclimated*, and adapted to their new treatment and habits in this country, (and though greatly increased and widely-spread, were by no means universally introduced,) when, about twenty years after the first importations of Merinos were made by Chancellor Livingston, and Col. Humphreys, it was whispered among us, that there existed in Germany a *choicer kind* of fine woolled sheep than the Merino—to wit, the sort denominated *Electoral Saxon.*

Let me now give a little sketch of the introduction of *Saxon* sheep. The manufacturers of *fine* cloths in this country, felt a deep interest in having the Saxony sheep introduced into the United States, so that they might be the better enabled to compete successfully, with the fine and soft cloths of the *English* and other foreign manufacturers, who were using to a great extent the exquisitely fine, soft, and silky Saxon wool, of German growth.

Under this *manufacturing* interest and influence, a small importation of Saxon sheep was made into the United States, in the year 1823. In that year Mr. Samuel Henshaw of Boston, imported *two* Saxon rams, one of which was sold to Mr. James Shepherd, who was at that time an extensive manufacturer of fine woollen cloths, at or near Northampton, Mass. It is understood that Mr. Shepherd was among the most active and influential, in procuring the earliest importations of Saxon sheep, and in encouraging and promoting the introduction and spread of that blood as far and widely as possible, throughout the United States. In the summer of the same year (1823,) and simultaneous with Mr. Henshaw's importation above-named, two rams were also imported from Saxony, by (or for) Mr. William J. Miller, a wool grower, who resided near the city of Philadelphia. I have no knowledge of any earlier importations of Saxon sheep, than those above-mentioned, and presume these were the *first*, or among the first, brought out. In the following year, (1824,) Messrs. George and Thomas Searle, merchants of Boston, Mass., imported a small vessel load of Saxon sheep; the number of sheep was somewhat less than a hundred; perhaps about eighty, in all. A portion of this importation were pretty good sheep of the kind, and were probably *pure bred*, or of *good blood*, which was more than could have been said for *all* of them. However, they *all*, including good, bad, and indifferent, *sold* well, and without much distinction as to *blood*, or as to *real* value and goodness.

The next year, (1825,) the Messrs. Searle, above-named, went *largely* into the business of importation, as did also some others, both in this country and in Germany. For a year or two, or perhaps I might say *two* or *three* years, the *speculation* in *Saxon* sheep raged almost as fiercely in our eastern cities and states as it had previously done in *Merinos*, some dozen or twenty years before. During the years 1825, '6, and '7, many vessel loads, consisting of large numbers of Saxon sheep, were imported into the United States, and landed at various ports, from Portsmouth, N. H., to Philadelphia, but greatly the largest number were landed at Boston and New York. Very few Saxon sheep were imported later than the year 1827, saving a small number brought out by German emigrants. Some of the early importations *paid well*, and were highly profitable to the importers; while others, later made, resulted in a heavy loss on the cost of importation. It was understood that the Messrs. Searle made a good deal of money, but on the whole, I doubt whether much money was made by the importers.

The speculation, or *fever*, in Saxon sheep, I think was at its height in 1825 and '26. Of a cargo sold in 1825 by public auction at Brighton, near Boston, some of the sheep brought as high as $400 to $450 each. From first to last, there were a good many *grade* or part-blood sheep brought out with the rest, and among them many miserably *bad* ones; poor, delicate, good-for-nothing animals, *without constitution*, and which could be of no possible value or use to anybody, but only serve to bring *discredit* on the *name* and race of Saxon sheep. Such, however, *sold* with the rest, and for a time brought good prices, little being then looked to, or thought of, by the excited American purchasers, beyond extreme *fineness* of fleece. The impure or *part*-blood sheep, sold as well, and for as good prices, as the best or pure-bred, for the American buyers did not, and could not then know the difference, nor select the one from the other. The very worst lots of sheep, many of them worse than worthless, were said to have been sent out to this country as a speculation, on foreign or German account.

The sheep procured and brought out by Messrs. Searle, were generally thought to be of better blood and quality than most of the other Saxons which arrived at Boston; and though many *grade* sheep were imported by them, with and among their full bloods, as a commercial speculation, yet those gentlemen had the reputation (and I believe they *deserved* it,) of not having any hand or agency in bringing out many (if any) of the very worst sort. At all events they were believed not to have brought out *bad* sheep intentionally, nor knowingly.

The Messrs. Searle, finally, toward the close of their importations of Saxon sheep, imported, for themselves, a flock of very choice, fine ewes, together with three or four superior rams, not intended for sale, but (as I was informed,) with the laudable object and intention of "keeping up the breed" in its purity, in this country. This select breeding-flock was during many years, in the hands of Mr. Grant of Walpole, N. H., with whom, or in whose care, the Messrs. Searle placed the flock, to be bred "on shares." I understood that the flock was finally *sold* to Mr. Grant, but whether he retains it, and it still exists in its original purity of blood, I am unable to say. It undoubtedly comprised some of the very best Saxon blood, which was brought out to the United States. I was told that the fleeces from that flock, brought one year, $1,37½ per pound; though it may be fairly presumed that the *odd cents* of that price, would come nearer expressing its market value at some periods since that day, and would perhaps have been nearly or quite as much as it would *some* years have brought in the general market; the *very finest* and most exquisite Saxon wool, not being duly appreciated nor *paid* for in this country, nor likely to be for many years to come, if ever.

Speaking of *prices* of fine Saxon wool in this country, I have now before me, a memorandum from the pen of Mr. W. J. Miller, of the *weight* and value at Philadelphia, of the fleeces of the two Saxon rams, imported by him in the summer of 1823, the same which are mentioned herein, as having been (if not the earliest,) *among* the very earliest, that were imported from Saxony. These fleeces were brought over from Germany *on* the two rams, and shorn soon after their arrival. The two fleeces after being washed, weighed together 7 pounds, (or 3½ pounds each). It consisted as follows:—

Of 1st quality....	2 lbs. 2 oz., at $2 per lb....	$4,25
2d. ditto......	1 lb. 8 oz., at $1,50 per lb...	2,25
3d. ditto......	14 oz., at $1 per lb.....	0,87½
4th and 5th, do with belly-bits,	2 lbs. 8 oz., at 50 cents.....	1,25
	7 lbs. amounting to	$8,62½

thus of course, making an *average* value of about $1,23 per pound, $4,31 for each fleece.

The above statement is only valuable and interesting, as an illustration of the views *then* entertained in this country, as to the *price* or value of Saxon wool. It will serve to show or remind us at this day, of the prices per pound for Saxon wool, which were held up to the view of our American wool-growers, just at the time when the *Saxon* sheep fever was beginning to rise and rage in the United States; and will assist in explaining and *excusing* what at this day looks like the almost *inexcusable* folly and madness, that could have led our sheep-owners to sacrifice their invaluable Merino flocks, for the delicate and infinitely less valuable Saxons. Even could those high prices for the wool have been maintained, the Saxon sheep would have been nothing short of an awfully dear bargain to the country, destined as they were, to be the *instrument* of supplanting and destroying the more valuable Merino flocks.

After speaking of the select Saxon flock, which was placed by Messrs. Searle in the care of Mr. Grant of Walpole, I wish to make particular mention of another Saxon flock, of distinguished excellence, and believed to possess very strong and unquestioned claims to purity of blood. I refer to the flock of Mr. Henry D. Grove, an occasional correspondent of yours, whose contributions to your pages I wish could be more frequent. I am always highly gratified and instructed by what comes from his pen. He is a man of *worth*, as well as of intelligence, and his *merit* is only surpassed by his *modesty*. Mr. Grove is a thorough Saxon shepherd. He first came over from Germany to this country about twenty years since, (I think in the year 1824,) when quite a *young* man, in charge of one of the earliest importations of Saxon sheep made by the Messrs. Searle. He returned to Germany, and having determined to emigrate and establish himself permanently in this country, he selected a flock of choice Electoral Saxon sheep for himself, and brought them out to the United States in the years 1827 and '28, and located in the state of New York. This flock he is understood to have bred pure and with entire success, to the present time. I have said herein, that Mr. Grove is a thorough Saxon shepherd. Of this I need give no better *evidence* than *his perfect success* in raising those delicate and beautiful "hot-house plants," generally known by the name of Saxon sheep. Though so difficult a task, in the hands of most *other* persons who have tried it in this country, Mr. Grove finds in it nothing impossible or difficult. In *his* hands the Saxons *live* and thrive, as well as the hardy Merinos do in mine. He is probably the most perfect and thorough shepherd in the United States. If I was a man of wealth, and wanted to amuse myself with the ownership and care of choice and rare animals, and Saxon sheep among the rest, I would resort to no one so soon, nor with so much confidence, as to Mr. Grove, for the purchase of a little flock of his pure Saxons. But I should insist (as a part of the bargain,) on his consenting to take me for a season as his *pupil*, in order that I might note the habits of his sheep, and learn his peculiar and successful mode of care and treatment, and that I might also imbibe from him something of his practical skill in reading their eyes and countenances, and in deciphering their looks and actions, by which he is enabled to "snuff disease" while it is yet afar off, and thus by timely care and the use of proper means, *avert* the trouble and danger while it can be *successfully* dealt with, which is usually before it would *attract the attention* of common observers, even among those who are sheep-owners, and who mean to take *good care* of their sheep.

Let us now turn back for a moment, to the period when Saxon sheep were introduced into the United States. We have seen that it was done at first, and mainly, through the interest and influence of the *manufacturers* of the fine descriptions of woollen cloths. But the manufacturers were powerfully assisted in their work, by speculators, importers, and dealers, in Saxon sheep. It became noised about, all through the country, that the *Saxon* sheep were as much *superior* to the *Merino*, as the Merino were *better* than the old white *native* sheep. Unfortunately, (though *strangely* as it *now* seems,) the people did not know any better than to believe in the grossly erroneous claims put forth in favor of Saxon sheep. So the new-comers, the *Saxons*, became, for a time, the universal favorites. The good, hardy, heavy-fleeced, profitable old Merinos, went "out of fashion," and everybody then ran after the Saxons, and got *Saxon bucks* and crossed them on their Merino flocks. Thus the best Merino flocks, which had cost so much money, and care, and trouble, were ruined and destroyed, (or nearly so,) by the cross of Saxon blood. Thus the *delicate* and *unprofitable* sort, overcame and finally drove out the *stronger* and (beyond all comparison) more valuable and *profitable* race. The Saxon cross became *universal*, or so nearly so, that throughout the whole country, there is *no known* exception. It is believed that there *is* no exception. This appears to be now the decided opinion of those who have the best and most extensive means of knowing and judging. There is plainly, *no exception* throughout the whole country, which can be clearly established and *proven*, even to the satisfaction of those who *wish* to believe it. The probabilities, are greatly against it. Of course, since the country has, as some one says, "discovered its mistake," and Saxons have fallen into general disrepute, there are *many* persons in various parts of the country who have put forth *claims* to the possession of the pure, unadulterated Merino blood. This, is the *natural* result of *demand*, and of the general call and desire, which for several years past, has been almost universal, to *get back* if possible, or *as far* and *as nearly* as possible, to the old and profitable Merino blood. It is worthy of remark, that these claims, now-a-days put forth, to the possession of pure old Merino blood, derived from the former importations, is, as a general thing, *not* made by those who would have been *most likely* to be able to make such claim, with truth; almost or quite all *such* persons whom I have met with or heard of, admit, frankly, (while they lament,) their mistake or misfortune, in having admitted or partaken the Saxon cross. But the *claims*, to present possession of the old Merino blood in its purity, now come almost or quite universally,from persons with whom it is not at all *likely* to be true, and from those, as a general thing, who are not entitled to much credit or confidence. Not but what some among them, are respectable and honest, well-meaning persons; but owing to the general carelessness, inattention, and neglect, (to say nothing of their limited means of knowledge, and their readiness to believe whatever stories are told them,) they are not likely to have any well-grounded foundation for their peculiar claims to *exemption* from the common misfortune, of having by means of the Saxon blood, or in some other way, *lost*, if indeed they ever *possessed*, the pure, unadulterated Merino blood, derived from the old importations from France and Spain.

I have been the more willing to discuss this question at the present time, because it is justly esteemed a subject of great importance, and I notice the fact that it has been to some extent latterly, a topic of animated and interesting discussion among the growers of fine wool in various parts of the country.

But the great length which this paper has already attained, admonishes me to close it abruptly; leaving some additional remarks on our present subject, to be embraced in my next communication, which I will endeavor shall not be at so great a remove from this, in point of time, as has intervened between my last previous missive to the Agriculturist, and the present. AMERICUS.

February 14th, 1844.

ON DRIVING SHEEP.

I HAVE been in the practice of purchasing and driving sheep from one portion of this state to the other for several years, and it may be useful to some of your readers to understand my method of conveying them in the cheapest, safest, and best manner.

We start them on the road as early as light appears in the eastern horizon, with an assistant before them, to prevent their rapid progress, and many unforeseen accidents which they are exposed to. It will take the most of one day to break them into a proper line of march. On the first day they will push forward several miles before they incline to eat. As soon as they will, let them commence feeding on the road-side. The man forward will take care that they do not progress but little faster than they usually do when grazing in their pastures. They will soon learn to run by one another two or three rods, then stop to feed, the forward column will frequently form a line in front, as they feed in more perfect order than many of our flood-wood companies do under military discipline. By this even management from day to day, they will keep full and not be fatigued. We generally let them rest awhile at mid-day, and secure them in a small yard about sun-down, without any expense. They are ready and convenient for their onward course early the next morning.

I have thus managed from 600 to 1,000 many times on several days' journey; they do not appear fatigued, but look full through the day. Our flocks do not fall away in flesh, but often gain on their journey. This method must look reasonable to those who are acquainted with the nature of the sheep; while feeding about thin pastures, they are always on the move; the most active are forward, and they are no more inclined to feed nights than a drove of turkeys.

To urge them along in the winter while snow is on the ground, one person must take a few and drive on ahead, those behind will follow on; but to get them along without fatigue, they must be allowed to string along the beaten-path for a reasonable distance.

The shepherd-dog must be a valuable animal to a flock-master, in any situation, and it is a wonder that we have none of them in this sheepish state. In an especial manner when there are so many worthless animals reared among us. If any of your readers have an extra one to spare, I would give in exchange a valuable merino-ram for it; both parties could be thus mutually benefited.

SOLOMON W. JEWETT.

Weybridge, Vt., Feb. 24th, 1844.

POTATOES AND SALINE MANURES.

WE have repeatedly called the attention of our farmers to the necessity of using saline manures to a much greater extent than is now generally practised. By saline manures, we mean all those substances which enter into cultivated crops, which are called earthy or inorganic, and most of which are left in the form of ashes when these substances are burnt. Thus we find that after drying and burning potatoes, we have left of ash, the following fixed or inorganic matters in the proportions specified:—

	Potato roots.	*Potato tops.*
Potash	40.28	81.9
Soda	23.34	0.9
Lime	3.31	129.7
Magnesia	3.24	17.0
Alumina	.50	.4
Oxide of iron	.32	.2
Silica	.84	49.4
Sulphuric acid	5.40	4.2
Phosphoric acid	4.01	19.7
Chlorine	1.60	5.0

These substances are just as essential to the formation and successful growth of potatoes, as the water, atmospheric air, carbonic acid, and ammonia, which enter into their composition, and are called the organic matters,—carbon, hydrogen, oxygen, and nitrogen—which make up the balance of the materials necessary to the perfection of the plant. Now, if we apply putrescent or barnyard manures in sufficient quantity to the land, we shall furnish to the plant all that it requires for its growth, as these manures being formed from vegetables, usually contain all the required materials for the reproduction of vegetation. But there is frequently a deficiency of such manures, and farmers are obliged to resort to muck, peat, sea-weed, fish, and other animal manures, as fertilizers; and these do not afford *all* the requisite materials. To remedy this deficiency, saline manures should be used to the utmost extent that they can be found profitable.

Ashes, leached or unleached, the latter much the most profitable, should be used freely. We know of no greater waste or worse management than for our farmers to sell their ashes, as they now too generally do. No price ever paid for them is any compensation for their loss. Every bushel of good ashes will yield about 20 cents worth of potash, which, in all cases, is an essential ingredient in the farm-crops, and worth to them for this purpose, as much as to the manufacturers of potash. Yet we find the farmers trucking them off by loads, for a few bars of soap, or some other trifling equivalent, varying from 3 to 8 cents per bushel. It would be some compensation to their owners, if it were made a condition of the sale, that the ashes should be returned them after leaching, as they are then worth about half the price of the unleached for agricultural purposes. Yet in the face of these facts, perfectly well known to every intelligent farmer, there are millions of bushels, annually thrown aside in the asheries scattered through the country, especially at the west, which are used to fill up pond-holes or streets, or are suffered to be carried off by streams beyond the reach of any profitable application.

Lime is an important ingredient in soils, yielding a portion of its substance directly to plants, and especially useful in effecting changes in the constituents of the soil and preparing them in the most befitting form, and under the most advantageous circumstances, to be taken up by the growing plants.

Plaster of Paris is highly useful as a manure for plants when adapted to the soil and climate, serving both as food for plants in a large degree, and as producing changes in the available portions of soils for the benefit of the crops.

Bone-dust is a necessary food for plants, and is peculiarly adapted as a manure for potatoes and turneps, containing as it does, great proportions of phosphate of lime and gelatine, the former of which, especially, enters largely into the composition of those roots. This manure, indispensable in some shape, is now thrown away throughout most of the country, yet with the simple expense of grinding, it could be made of immense value to the farmer.

Salt is an invaluable addition to most soils, both of its materials, chlorine and soda, entering largely into plants, besides combining to a great extent with the moisture of the atmosphere, as do each of the preceding, thus securing an unusual supply of this vital material for growing plants during a drought. It is also, in common with others, an important agent in the extirpation of worms and insects, so frequently destructive of vegetation.

Saltpetre, though too expensive to be used profusely, is a valuable and economical manure when applied as a soak for seeds, which protects them from the ravages of grubs, &c., or when placed immediately around the roots of plants; giving them an early, vigorous growth, which thereby frequently secures a large crop, that might otherwise be lost by drought, or cut off by an early frost.

Nitrate and sulphate of soda, ammoniacal liquor, and some other ingredients have a similar effect, and may be used with the same advantage as the preceding.

The above applications may be extended to nearly all crops, grass, shrubbery, and fruit-trees, with the same benefit as to potatoes.

In cultivating potatoes, those varieties should be selected which give the greatest value; some of these will produce 20, 50, or in some instances even 100 per cent. more than others; but it must be remembered that quantity is not always the test of value, a rule that holds to a very great extent with roots, hay, and some of the coarser products. To such a degree does this difference reach, that Professor Johnstone asserts, that one kind of potatoes will lose 80 per cent., while another may not lose over 10 per cent. of water, a difference owing to the different soils on which they are planted, and the variety used for seed. He says, that of the three varieties used in England, known as the cups, red-dons, and white-dons, the first gave three tons of starch (which is the principal test of the value of potatoes,) per acre; the white-dons gave 2½ tons; and the red-dons gave only 1½ tons. Thus the cups, although the lightest in quantity of the three varieties by three tons per acre, gave double the quantity of nutriment that the red-dons yielded. To this difference in the relative amount of starch afforded by each, is to be added the other nutritious ingredients of potatoes, gluten and oil, which vary according to the soil, manuring, and variety, to an extent even much greater than that of starch.

Now these are considerations that every intelligent farmer will not fail to consider of great weight, in determining the mode of cultivation. Potatoes, and every crop, may be made of as much more intrinsic value for any given quantity, as stall-fed beef and mutton is than light grass-fed; or corn-fattened pork is superior to the rambling, shack or slop-fed swine. These are important hints for farmers, which men of sound judgment and intelligence will not fail to appreciate and apply. R. L. ALLEN.

Buffalo, March 26, 1844.

CHESS FROM WHEAT.

I FIND, by accidentally recurring to the late numbers of the Agriculturist, that it is quite time some of the advocates of the non-convertibility of wheat into chess, who have publicly noticed my "heresy" on this subject, should be answered. It occurred to me when I first noticed the replies to my last article, that it would be best "*to defer clearing off the side-walks till it was done snowing*," as something of a storm was anticipated. My range of agricultural reading is for the present very limited, which is, perhaps, the reason that I have seen but three articles on the subject. But let us first see what is my position.

It is simply the suggestion that chess is the original of wheat; a suggestion founded on our ignorance of the true original of wheat, and the strong circumstantial evidence of its convertibility into chess under a variety of enumerated circumstances. I do not assert it as a settled question, I content myself with arraying some facts in support of the convertibility, which I say "if produced against a criminal on a trial for a capital offence, and *not satisfactorily explained*, would inevitably result in hanging him." Now, although I willingly concede to each of my opponents in this matter (what I have no evidence to doubt,) extended observation, candor, and intelligence; yet I must say, they have adduced neither fact nor argument to disprove my suggestion, which is at all satisfactory to me, and I may add, probably, to nine tenths of the wheat-growers of the west. The *apparent* facts are all on one side; science, they allege, is on the other. By what authority is this assertion made? and what is science?

Science is but an extended collection of facts, comprehensively and methodically arranged, illustrative of any given subject, which are the result of direct observation, or incontrovertible deductions from such observations. Anything short of this definition in its fullest import and extent, may be theory, plausible and convincing perhaps, but is not well established, scientific truth. We have had various alleged sciences, in successive ages of the world; necromancy, astrology, alchemy, and the *science* of mesmerism of the present day. Each of these, in their turn, have had large numbers of sincere and intelligent believers; yet they are not ranked by the highest and soundest intelligence of the present time, as embodying scientific truth. And who that has witnessed the slow and imperfect progress of the sciences, and the frequent unsettling of long-established, generally-acknowledged principles; and the re-formation of the whole subject—of astronomy as taught successively by the Egyptians, Grecians, Romans, and the men of genius of the middle ages; medicine, as taught by Hippocrates, Galen, and Aristotle; chemistry, as taught by its early, yet ingenious and gifted, but frequently mistaken founders, in the last century—will pretend to say, that botanical science is yet advanced so far as to place the non-convertibility of wheat into chess, in the class of *absolutely incontrovertible truths?*

And here let me say, is the precise point of difference between myself and opponents. The strong array of facts in my favor, induces the belief of the *probability* of my position. This is confidently, *absolutely* denied, under the shield of "a scientific principle;" which, after all, subsequent discoveries and further developments in botany, may prove to be *no* principle in the science.* It is a little singular then, that gentlemen of reflection should, under all the circumstances of the case, put forth their opinions with quite the confidence expressed. I was perfectly aware of the difficulty under which they labored of *proving a negative*, before I started. If they have rashly encountered the undertaking, the difficulty is with them, not me.

It is not to be denied, that a large portion of the wheat-growers in this country, I will not say a majority of the whole, as this, although it may be true, is not a fact within my knowledge, but I may safely say a large majority of the west; men of intelligence, careful and close observers, of sound judgment, slow to form opinions, perfectly independent of popular prejudice, and arriving at conclusions exclusively from their own observations and their own reasoning therefrom; thousands of such men entertain the belief, that under a variety of circumstances, adverse to the successful growth of wheat; such as growing on wet or marshy lands, or where a scanty nourishment was afforded; when thrown out by frost in winter, or eaten off too closely by animals, wheat has turned into chess. They believe it; first, because they have seen this effect in countless instances, where they had every reason to believe that not a particle of chess existed in the ground affording the crop, or was sown in the seed; second, because they think they have found (and no proof hitherto adduced is sufficient to convince them to the contrary) wheat and chess growing on stalks from the same stool, having a common root; on different heads from a common stalk; and kernels of each from the same head. It is readily conceded, that these apparent proofs do not carry the highest—absolute evidence with them; for with the decided hostility existing against this opinion, they ought to have carried the matter to a further trial, and not content themselves with the evidence thus obtained. Successive plantings from the different products, thus casually obtained, carried through several generations, under every variety of circumstance, would put the matter on a more certain and incontrovertible basis.

---

* Chateaubriand, in noticing some vagaries of vegetable nature in our western hemisphere, conflicting with the current observations in Europe, there enrolled as *unimpeachable science*, says, "The naturalist will perhaps contest the accuracy of this observation, for in Europe, everything which deranges our systems, is treated as ignorance or wanderings of the imagination." Montaigne says, "If nature should be pleased to reveal her secrets to us one day, what errors, what mistakes shall we find in our paltry sciences."

It is for the conclusive and authoritative settlement of such, and an infinite number of other inquiries, that we need *a national agricultural college*, where competent men can be placed, under every advantage for arriving at long-tried, well-authenticated, definite results, such as no private gentleman can afford either the time or expense of establishing. These experiments ought to be made for a succession of years with chess, highly cultivated; wheat badly cultivated; the careful cultivation of wheat and what is supposed to be chess growing from the same root, or stalk, or even head; wheat-blossoms fecundated with the pollen from chess, and chess from wheat, &c., &c. Results, from a series of such experiments, perfectly well guarded, would be entitled to universal acceptance and general belief. Until such are exhibited, I must still claim to rank among *the heretics*.

An approximation toward harmonizing the radical difference between spike-headed and panicle-bearing plants, which "P." *assumes* as a fundamentally established principle in botany, is afforded in the seven-headed wheat described in the II. Volume of the American Agriculturist, by Dr. Lyman. Varieties of this wheat have for some years been grown in this vicinity, in which this difference is still more lessened, as from the same seed, there is a great diversity of product, both in the form and product of heads, the latter varying from 3 to 15 heads on a single stalk. Let me suggest to "P." that "there are more things in heaven and earth, than are dreamt of in our philosophy."

Agriculturists, botanists, or philosophers, can not prove from any conclusive experiments hitherto made on this subject, that the advocates of the convertibility of wheat into chess are wrong. We show good reason for occupying our present position. Will they be kind enough to afford us unquestionable evidences of its untenableness, before they call upon us to abandon it? I have pointed out the way in which it can be done, if it can be done at all, by any one having the means for doing it. When *fairly* and *fully subjected to this test*, I presume every gentleman of candor and intelligence, will be ready to shape his opinions in accordance with it.

"A Cayuga Farmer" in a contemporary journal, laments over the injury to good farming, my "heresy" will produce. He will banish his fears when he refers again to the article, and finds that bad farming (sowing wheat in unsuitable places and under adverse circumstances) is the sole alleged cause of transmutation. As it is facts alone we want on this subject, which it appears no one has to offer of a character sufficiently conclusive to convince his opponents, I must, with what is above briefly stated, take a final leave of the subject. R. L. Allen.

Buffalo, March 10, 1844.

We doubt whether the further discussion of this matter in our columns, will prove interesting to the majority of our readers, and unless some new and important facts can be adduced to sustain the arguments pro or con, we decline any further admission to articles on this subject. It is well known to most of our friends that *we* are no believers in the doctrine of transmutation, and we should demand the most irrefragable evidence to convince us that wheat, rye, or oats, can be changed to chess.

PAULAR MERINOS.—No. IV.

In my last, I promised that you should soon hear from me again, in relation to the miscalled or spurious Paular sheep, of Messrs. Jewett, Avery, and others.

That promise, I will now redeem. You tell me that I have already, by my freedom of speech, and the boldness of my positions and opinions, offended many, and that I may chance to find ere long, that I have stirred up a hornet's nest, about my ears. Be it so. Though at first I felt a natural timidity and shrinking, at the idea of being drawn into an unpleasant public controversy, and would most gladly have avoided it; yet now that I am at home again, in winter quarters, and have, (as the saying is,) "got my hand in" a little, I can only say that if they want "a good set to" or for that matter, a winter's campaign, let them now come on. In the poet's words, "come one, come all." "Lay on Macduff, and damned be he who *first* cries, hold, enough."

But who are these threatening and truculent looking personages, who have been so disturbed by my former remarks in your columns? So far as I can understand it, they are, without exception, *interested* persons, i. e. *ram*-raisers, and ram-sellers, who are fearful lest their "occupation will be gone," or at least be rendered *less profitable*, by the exposure of these Paular humbugs. Capable and "tonguey," artful fellows, I do not doubt there are, among them, who will flutter and make some little, wordy bluster, for a time, about the matter. It would be strange, if they did not. But it will be all of no avail. They had far better be quiet, "every mother's son of them," and this Mr. Jewett and his clerical friend, the Rev. Mr. Avery, in particular; for in truth, as a quaint old author hath it, their case is "like a foul bog, the more it is stirred, the worse it smells." It will not bear probing to the bottom. In doing so, its odor does not sweeten, but savors strongly of the *pocket*, and of *speculation* on public credulity. In a word, the more the case is examined the worse it appears for them. Some among them will probably feel still worse than they now do, before we are through with the subject. If those people had known what was good for themselves, it seems to me they should have been as whist, and lain as close as quails. But you know the ancient saying, that "those whom the gods have determined to destroy, they first make mad."

I do not yet find that my remarks have offended any of the plain farmers and wool-growers, who are anxious to get at the truth. *They*, in their natural desire for improvement, were (till their eyes were opened) exposed to being misled and gulled by the *catch-pictures*, and specious statements of this clique of Paular speculators, who publish the most *taking* and effective sort of *advertisements*, which, though put forth in the form, and under the thin disguise of letters and "communications" "for the Albany Cultivator," &c., &c., are in reality, usually from the adroit pens of these very owners and dealers themselves, who of course have an *interest* in trumpeting forth the wares (sometimes little better than worthless,) which they wish to sell. The Albany Cultivator, not to speak of other publications, has long teemed, and *groaned* (at least many of its *readers* have) with such things. I used to be caught with such baits and traps, myself. But I have grown older, if not wiser since. Is it not too bad, that we subscribers to agricultural publications, should be asked to *pay* for such worthless rubbish; like the man, in the story related by Dr. Franklin, who was invited to *pay* for *heating* the poker, which he would not allow to be *used* upon himself?

But to my subject. Mr. Jewett complains in your October number, that I have spoken of his sheep as being "a very coarse *breed*." He is mistaken; for the fact is, I do not consider them, and did not *speak* of them, as being of *any* breed, at all. In repeated instances, *he* himself speaks of them as "a *breed*," "a variety," as if they *really were*, or as if he wished them *thought* to be, pure bred sheep, belonging to some particular breed. In my former remarks about *coarseness*, I spoke more particularly of his boasted *ram*, and expressed the opinion that he was "not a genuine Paular, nor a pure bred Merino, of any sort." But I would *now* take broader ground, and deny that Mr. J.'s flock is of any particular *breed* or race of Merinos. I do not believe that they, (his Paulars, so called,) are of *any* breed, in the common or proper sense of the word. I defy him to *prove* that they are. I challenge the *proof*. Come, Mr. Jewett, let us have it, so that the public may be able to judge. It is a pity that any injustice should be done your sheep, or any doubt rest on them, if their pure lineage can be shown and established. Why, Mr. Editor, I expected to have seen by this time, at least as large a quantity of affidavits, as could be contained in one of those "*milk bushels*," spoken of in your columns, not long since, by your entertaining and instructive Mississippi friend, Dr. Philips of Log Hall. However, for that matter, a *cart-load* of regular Vermont affidavits and certificates, all sworn to, in due form, before a Justice of the Peace, would not have at all surprised me. Doubtless such evidence would be satisfactory to some persons, to all for instance, who are in the habit of reading and relying upon the mass of certificates which usually accompany quack medicines. Of course every one is at liberty to judge for himself. But on *this* subject, I'am free to say, it would all amount to very little, in *my* estimation. Much of it, might be honestly intended; but still it would have little if any weight with me; for the simple reason, that, in my opinion, *it could not be true*. Now I hope you will not think me obstinate in my disbelief, nor uncharitable. It is in this case, only *credulity*, that is wanting. It is with me, (I confess it,) "a foregone conclusion,"—but only because I have *previously* and long since, patiently and thoroughly examined the whole question, till I became satisfied where the truth lay, as to there being, or *not* being, any of the pure old Merinos in the hands of these ram-selling speculators; or indeed what is *more*, any of the old Merino blood, left pure and undegenerate, in the whole country.

I have before expressed my opinion on that subject, very fully, in your columns, and it is not now necessary that I should repeat it, any further than to say, that those opinions and views were not hastily formed, nor without considerable opportunity for observation and knowledge of the subject; nor were they rashly put forth; they were at least well considered, and I am now, upon more reflection, prepared to *affirm* and defend them.

Mr. Jewett assures us, in your last October No., that there is now existing in his county, "one flock of 400 pure bred Paular Merino sheep, in the possession of a son, whose father purchased, some twenty years ago, direct from the importer, and these have never been adulterated by *any other breed*." This, (*if true*,) is really an announcement worth making. You, Mr. Editor, must rejoice at it; and your wool-growing readers, I doubt not, will all, with one accord, regard it as being a most interesting fact; that is, *if it be* a fact.

To have been the occasion, the humble instrument, of eliciting and bringing out a piece of intelligence so interesting and so truly important to the public, would not only afford me much ground for satisfaction, but be conclusive evidence of the usefulness of this discussion, and that my slight labor therein has not been in vain. But before indulging any such complacent feelings, I am bound to say, that the *truth* of this assertion of Mr. Jewett's, is not only *doubted*, but it is *entirely disbelieved*, by many large and intelligent wool-growers, residing in the same vicinity with himself, whose means of information are extensive, and whose *interests* prompt them to a rigid scrutiny of the truth of all such pretensions, as well as to a close examination of the quality and value of all the fine-woolled flocks of any importance, for a great extent of country around them. Those persons, or at least some of them, have had not only a long and familiar acquaintance with the flocks of their own *county*, but, to my certain knowledge, they have travelled great distances, both in, and *out*, of their own state of Vermont, and have ransacked the country far and wide, without success, in search of good, hardy, heavy-fleeced, *pure bred* Merinos, with which to cross and improve *their own* flocks. They assure me, that according to the best of their knowledge and belief, there is no such flock of pure bred sheep, as Mr. Jewett describes, neither in his *county*, nor in the state of Vermont, nor yet in any part of the United States, so far as their knowledge extends. They feel great curiosity and interest on this subject, and say they shall be greatly obliged, if Mr. Jewett will, through your columns, have the goodness to inform the public, of the particulars of the *location*, the name and residence of this "son of a father," whom he alleges to be the possessor of such a truly precious inheritance. I almost wonder that Mr. Jewett did not condescend to give us full particulars, in his former communication. But I trust he will now have liberality and public spirit enough to respond to this call, and furnish us the much desired information, without further loss of time. It is a duty he owes the public; for surely the fortunate owner of that invaluable *pure bred* Paular flock, must have a " local habitation and a name;" and if so, it is of much consequence to us farmers and wool-growers, that we should not be left longer in ignorance of such valuable items, which of course Mr. Jewett can have no motive for withholding. When he lets us know the whereabouts of those 400 pure Paulars, we will all go and see them, and *purchase* too, if they are "*right*," and their happy owner will consent to part with any of them.

But seriously, is it at all likely, that such a flock as Mr. J. describes, such a fountain of pure, unadulterated Paular Merino blood, would have remained to this late day, undiscovered, and unknown to *other* wool-growers in Mr. Jewett's neighborhood? It seems to me, to say the least, very improbable. I have no sort of faith in it. Not that Mr. Jewett intended to deceive us—of course not. But then *he* may *himself*, have been grossly deceived, and imposed upon in this matter, as well as in some others.

Can it be possible that in his story of the 400 Vermont Paulars, Mr. Jewett refers to the flock of Mr. Hull, of Wallingford, in that state, from whom it is understood that he purchased two or three sheep, including his boasted and pictured *ram*, the very same identical *mongrel*, which was the subject of my criticism, and whose unfounded claim to the name of Paular, was the original occasion of my remarks? If it should prove that Mr. J. did really refer to the flock of Mr. Hull of Wallingford, I presume it will be enough for this time, that I should quote the published views, of an experienced judge of sheep and wool, residing in Vermont, not far from Mr. Jewett, and who can not well be mistaken in regard to what he says on the subject in question. I have reference to Mr. Wightman Chapman, of Middlebury, Vt., who is presumed to be at least as good authority as either Mr. Jewett or Mr. Hull, or Mr. Hull's clerical coadjutor and brother-in-law, the Rev. Mr. Avery. I presume no one will question this, nor doubt Mr. Chapman's intimate and familiar knowledge in regard to wool and sheep. I quote from volume 2d, of "Transactions of the New York State Agricultural Society," for 1842, in which, Mr. Chapman says:—

"There are a great variety of other breeds of sheep here, among which are a breed from Wallingford in this state; they are sometimes called the Paular Merino, but they are *not at all similar* to the Paular Merino I have seen from the flock of Consul Jarvis, being much *larger* and *coarser*. For mutton, they are undoubtedly superior to most breeds we have here; but for *wool*, I think *inferior* to many others."

This pithy, but pertinent and valuable extract, (published with the sanction and under the auspices of the New York State Agricultural Society,) would seem precisely to hit the case of these spurious Vermont Paulars of Messrs. Jewett, Hull, and Avery; it describes them exactly, and is enough to "do up" the subject, for the present. You shall however, in due time hear further from me in regard to these matters.

EXAMINER.

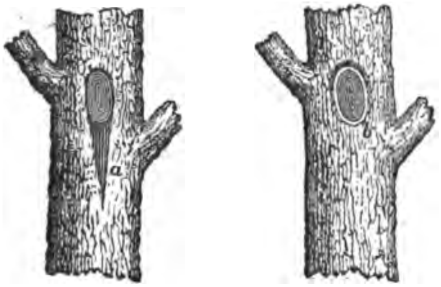
New York, Dec. 8th, 1843.

REMARKS ON PRUNING.

ALTHOUGH pruning is an operation of very general practice, its principles are but little regarded, and often great injury is done to trees by injudicious management. It is an art which can not be wholly learned from books or by lectures, but requires a well-grounded knowledge of vegetable physiology, and a strict observance of the modes of growth of the various kinds of trees. In order to execute with success this very important branch of arboriculture, it is absolutely essential to carefully observe the periods of the flow of the sap and of the appearance of the leaves; the growth of the branches, and the manner each kind is disposed to produce fruit. For, ornamental and forest trees require their heads to be regulated and balanced, so that one side may not have a disproportionate number or weight of branches to the other and those of trees which stand along the borders of cultivated fields aften require foreshortening so as to prevent their shades from injuring the crops; and in order to preserve the vigor of fruit-trees, to render them more beautiful, and to cause the fruit to be larger and better flavored, provision should always be made for a sufficient quantity of bearing-wood duly distributed in every part of the trees and properly exposed to the air and light, and at the same time, to remove all superfluous and useless branches which tend to exhaust and cause premature decay.

The most favorable season for pruning, in general, is when the trees are in leaf and their vitality is in full action; for, in many instances, as in the oak and walnut tribes, if performed during the dormant periods of the year, an incipient decay of the surface of the wound takes place, and the bark below loses its vitality, and the wound soon becomes enlarged to a considerable extent downward, as indicated at *a*, in *fig*. 31; and in addition to the space occupied by the branch, it exposes a portion of the surface of the stem to the action of air and moisture, which in time decays, and leads to final destruction. On the contrary, this rarely occurs in a vigorous tree that has been pruned in summer, soon after the expansion of the leaves, when the vital functions are in full activity, and the layer of alburnum or young wood has already begun to be formed, and which may be seen around the edges of the wound, as shown in *fig*. 32, by the white ring at *b*. As the season advances, the wound becomes more and more covered by the young wood, which, by the end of summer, will be so far ripened, as to protect the bark from the effects of moisture and winter frosts. The proper time for performing this operation is when the leaves have acquired one half or three fourths of their full sizes. There is another advantage, also, attending this period for pruning, in enabling the operator to free the trees from an excess of foliage, and to give proper weight and symmetry to their heads. These principles have been deduced from experience, and are strictly in accordance with the laws of vegetable physiology.

Fig. 31. Fig. 32.



Pruning Trees.

There is a prevailing opinion that, if trees be pruned when the sap is in free circulation, they will "bleed," and thereby deprive themselves of a portion of their chief food and nourishment. This "bleeding," as it is termed, can be of no essential harm to a tree, as nearly two thirds of the sap is thrown off by evaporation through the surfaces of the leaves, after having performed its most important functions, while the other third is supposed to undergo peculiar changes, and contributes to the formation of wood, bark, leaves, fruit, &c. There is also a popular notion, that when branches are taken from a tree, so many organs of waste are cut off; and it has been practically insisted upon, that by the excision of large branches, the supply of sap and nourishment which went to their support, would cause a proportionate increase of stem. The results of experience, it may be unnecessary to add, prove this opinion to be erroneous in principle, and that when a branch is cut off, a portion of nourishment to the stem is also cut off from the junction downward to the root. Every branch of a tree, of whatever size it may be, not only draws nourishment and increase of substance from the stem and its corresponding root in proportion to its size, but also supplies them in return, with a due proportion of nutriment, and by which their substance is increased; for, if an overgrown branch of a thrifty tree be pruned off, the annual increment of the diameter of the stem is found not to exceed its previous rate of growth; or, the excess, if any, is not equal to the amount of wood which had been periodically formed by the branch or branches thus separated from the stem. If the branch, whether large or small, acted merely as a drain on the vessels of the stem and root, and if the sap it derived from them were elevated to the leaves of the branch, and thence returned no farther than the origin or point of union with the stem, then the common opinion would be correet. On the contrary, however, when it is found that the existence and increase of every branch, twig, and leaf, depends on a communication with the root, and that this communication passes through the stem downward to that organ, and from it upward periodically, and, moreover, that every periodical series of new vessels thus formed in the branch, has a corresponding series of vessels found in the stem from its point of emitting the branch to the root, it is clear that a branch not only increases in substance by the functions of its own organization, but must, of necessity, periodically increase the substance or diameter of the trunk or stem.

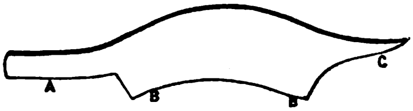
D. Jay Browne.

Read before the New York Farmers' Club, April 2, 1844.

GRAFTING-KNIFE.

As the present is the season for selecting and setting grafts, and knowing the lively interest you take in all that pertains to the fruit-garden and orchard, I send you herewith the description of a knife which I have found superior to all others, for splitting the head of the stock in performing that operation, both as to convenience and expedition. Its form will best be seen by a glance at the accompanying drawing.

A Grafting-Knife, Fig. 33.



It should be made entirely of steel, and its great advantage consists in the curved edge *b*, *b*, which instead of loosening the bark from the stock, and thereby rupturing the vessels which convey the sap, *hugs* it to the wood, and makes a clean, smooth cut.

It is used by forcing it into the stock with an ordinary hammer or mallet, after which the knife being loosened from the cleft the wedge, like point *c*, which should be made at least a quarter of an inch thick, is driven perpendicularly into the centre of the stock, and serves to hold open the cleft during the operation of setting the scions.

WESTCHESTER COUNTY.

TAMING A SAVAGE BULL.

As I heard last week of a farm servant being nearly killed by a bull, and as I sometimes hear of valuable bulls being killed on account of their being too savage to be safe, I have ventured to send you a plan to prevent bulls from injuring persons or animals of any kind. But, in case you consider this plan of too trivial a nature to be of general use, I request you will put my letter and its contents into the fire; as I have no doubt you are much troubled with useless communications.

The plan I send, I have used with perfect success, with a very savage bull I bought. Any blacksmith can make it; the cost about five shillings: and it does not cause any annoyance to the animal when he does not try to use his horns.

b is a cap screwed on the end of the horn; *a c* is an iron rod hanging on a pivot in the cap—a chain from it leads to a ring in the bull's nose. The end of the rod *a c*, at *a*, fig. 34, ought to be in a line from the root of the horn to the end of it; so that, in attempting to touch anything with his horn, the point *a* comes in contact with it, when of course the rod *a c* takes the position of one of the lines in fig. 36, *d e* or *g h*, and punishes the bull by forcing up his nose.

METHOD OF TAMING A SAVAGE BULL.

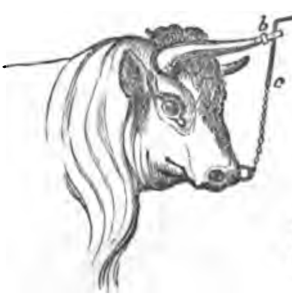


FIG. 34.

FIG. 35.

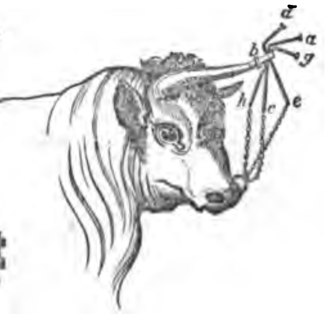


FIG. 36.

I turned a three-year-old savage bull with a cow that was bulling, and also turned a yearling bull with them; in a few minutes the young bull found that he was master, and punished the old one very severely: and I was shortly after able to take off the irons, and as long as I had him he never offered to hurt a person, although when I bought him he had tossed several people, and was sold to me as incurable.

ERASMUS GALTON.

Roy. Ag. Soc, Journal.

In addition to the above, we have found that suspending a thick board from the horns in front of the head, sufficiently wide to prevent the bull looking straight forward, would have the effect of taming him; wearing a heavy poke also; but the English method, on the whole, seems the safest, and is much the neatest in appearance.

PROFITS OF POULTRY.

I SHOULD be glad to see stated in your paper the profits of, and the number of eggs laid by a given number of hens for one year—how many bushels of grain they consumed—what kind of grain they were fed with—how they should be managed and treated to get the most eggs—what kinds of fowls are best to keep for eggs—which pays the best, hens kept for laying or to raise chickens—and which is the most profitable, geese or hens. If you can not answer my request upon good authority, please ask correspondents through your paper to give you an account of *actual* experiments.

H. C. M.

Miller's Place, Jan. 20th, 1844.

The Poland hen is undoubtedly the greatest layer. For some excellent articles on the breed, feed, and management of poultry, see American Agriculturist, Vol. I., page 179. Also Vol. II., pages 247, 321, and 325. Of the number of eggs, quantity of food, &c., in a year, we are unable to answer, and will be much obliged if our correspondents will reply to the inquiries of H. C. M.

NEW YORK STATE AGRICULTURAL SOCIETY.

IN presenting the list of Premiums of the New York State Agricultural Society, we submit respectfully a few observations upon them.

1. To write an "Essay on Farm Management," &c., for which a premium of $20 is offered, would require a sizeable volume. We think, therefore, that the title of this essay covers too much ground, entirely, and if properly treated at full length, would deserve a prize of $200. Would not a division of the subject into several parts be better?

2. The "Essay on Rotation of Crops." Should this not also be divided, and a separate premium given for the best rotation proper for at least four different kinds of soils, viz: the sandy, gravelly, stony, and clayey. We are not sure that primary and secondary regions should not be divided; especially, where one abounds with limestone, and the other does not. It is well known to all practical farmers, that a good rotation for a clayey soil would be a most miserable one for a sandy soil; no one, therefore, could write properly on

this subject, without making a distinction of the earthy elements on which the crops were to be grown.

3. If Ayrshire cattle are deserving a classification, should not the premiums on them be as numerous as on Durhams, Herefords, &c.? It strikes us that the crosses of any Improved Breed should be classed with Native Cattle; for, frequently, it is impossible for the owners of these animals to tell which is which, and how they are bred. In fact we can not see the propriety of talking about a *native* or *indigenous* breed—we have *none* such—all have been recently or remotely imported, and the moment we depart from *thoroughbreds*, what remain are *positive grades*, and it seems a waste of words to attempt to make any other distinction.

4. In addition to showing a handsome form and fine action, all horses ought to be tried for a single mile at least, (four would be still better,) under the saddle or in harness; and again, what weight they can draw. Where the merits of the animals were equal, those showing the best pedigree, or in other words, the most blood, should take the premium.

5. Swine ought to be divided into two breeds, large and small.

6. Premiums might very properly be given for the best Apple, Pear, Peach, and Maple-Sugar Orchards of 5 acres each or more; the best 10 acres of the more valuable kinds of timber, such as the Oak, Pine, Cedar, &c.; the best Mulberry Plantation of 5 acres; the best Garden; the best 5 acres of grass and hay each, of Timothy, Red-top, and Clover; the best acre of any new grain, root, or grass, &c., of particular value; Poultry of all kinds; Rabbits; Shepherd and Cattle-Dogs; Jacks, Jennies, and Mules; and any new valuable animal like the Alpacas for example. There are many other things for which premiums may very properly be given, when the funds of the society shall have been sufficiently increased; but the above strike us as the most important, and we close our remarks by referring to what we said on this subject, Vol. I. page 140 of this periodical.

We do hope that the regulation will be made of excluding every one from the show-yard on the first day, except the judges and such persons as they may wish to consult from time to time; for instance, any of the owners of animals or implements, &c., and such persons should leave the yard the moment the judges have got through questioning them. It is perfectly idle to suppose that the judges can do either themselves or the public justice unless this regulation be strictly enforced. The ground for the plows to operate on should also be kept clear by a strong patrol on horseback. The second day of the show, the yard should be open as heretofore to the public, at a charge of one shilling—children half price. The third day the same, when sales may take place, which under no circumstances should be by auction. The experience of both this country and Europe has settled this question, that the moment anything, *on such an occasion* is offered at auction, it puts an end to all confidence, and sales can not be effected except at the most ruinous prices. We sincerely hope, therefore, that every one will be permitted to manage his own affairs in his own private way.

If it be not presumptuous on our part, we would add further, that it would be more correct to entitle the Society's exhibitions, a "Show," and not a "Fair." A "Fair" is simply an exhibition for sales like those held in our country by benevolent societies. In England the meaning of these words is totally at variance, and are so used by all their agricultural societies. We may be deemed hypercritical, but it really seems to us to be departing from the dignity of a name, to denominate a superb "Show" like that now annually got up by the Empire State, under the title of a simple "Fair." We respectfully and earnestly crave the attention of the officers of the society to this correction; for, although a great authority has said, "a rose may *smell* as sweet by any other name," we beg leave to add, that in our humble judgment it does not *sound* as well.

Annual Exhibition of the New York State Agricultural Society, to be held at Poughkeepsie, September 18 *and* 19, 1844.

List of Premiums for 1844.

MANAGEMENT OF FARMS.

For skill and improvement in the management of a farm, taking into view the land, stock, and produce, with all the appendages.

First premium, a gold medal—Second and third, silver medals.

No premium will be awarded unless an accurate description of the farm and statement of the crops, &c., with all the expense of the management and profit of the farm, is furnished. These premiums will be awarded only to those whose farms are improved in a manner that renders them examples worthy of imitation.

ESSAYS FOR PUBLICATION IN THE "TRANSACTIONS."

For the best series of essays on the importance of scientific knowledge in prosecuting successfully the ordinary pursuits of Agriculture,........	$100
For the best essay on farm management, including all the details connected with the successful management of a farm,.....................	$20
For the best essay on the rotation of crops adapted to the climate of this state,.................	20
For the best essay on subsoil plowing, with the results of actual experiments in the state of New York,............................	20
For the best essay on the culture and manufacture of silk,............................	20
For the best essay on the cultivation of the apple, for exportation as well as domestic use,.......	20

EXPERIMENTS AND IMPROVEMENTS IN AGRICULTURE.

Turning under Green Crops.

For the most satisfactory experiment of turning under green crops as a manure, on not less than one acre of land, with a detailed statement of the whole process in writing, $10—For the second best, 2 vols. Trans.

Preparation and Application of Manures.

Best experiment in the preparation and application of manures, with a detailed statement of the expense and all matters connected with it, $10.

Improvement of Agricultural Implements.

To the person who shall exhibit at the next fair, any new or improved agricultural implement of his own invention, which shall in the opinion of the committee merit a premium, a silver medal.

Proof must be given of the work performed by the implement previous to its exhibition, and of its having been used and approved by some practical farmer. To be open for competition to any citizen of the United States.

Comparative value of Crops as food for Cattle.

For the most satisfactory experiment upon a stock of cattle not less than four in number, in ascertaining the relative value of different kinds of food used, as compared with hay, with a detailed account of the fodder used, and the expense of raising and feeding the same. The experiments to be made in three winter months, or whenever satisfactory experiments can be made, $20—Second best, 2 vols. Trans.—Third best, diploma.

Experiments in Indian Corn.

A premium of $25 for the best, $15 for the second best, and $10 for the third best conducted series of experiments in the cultivation of Indian corn. Not less than one acre of ground to be planted.

The experiments to be made with a view of ascertaining what are the peculiar laws relating to that crop—particularly how thick it should be planted, how the plants should be distributed on the ground—whether in hills, drills, or otherwise, what kind of manure, and how it should be applied, the manner of cultivation, and the kind of corn planted, to be particularly stated. The cost of each process, the amount of corn raised by each of the different modes of culture, and the relative profits, to be accurately and minutely stated in the report to the committee.

Irrigation.

Best conducted experiment in the flooding and irrigation of lands, $10.

Sheep.

Best managed flocks of sheep, including particular statements of the breed, expense of keeping, increase, amount of wool, value, &c., $12, or a gold medal.

Dairy.

Best managed dairy, with a detailed statement of expense, and everything connected with the management as well as profits of the same, $12, or a gold medal.

For the greatest quantity and best quality of butter produced on any farm, from a given number of cows in 30 days the present year, with a particular statement of the method of making and preserving the same, with a satisfactory account of the manner in which the cows have been fed, and the general management of the milk and butter—a silver medal.

CATTLE.

CLASS I.—*Best of any breed.*

Best bull, 3 years old,	$20	Best cow, 3 years old,	$20
Best bull, 2 years old,	15	Best cow, 2 years old,	15
Best yearling bull,....	10	Best yearling cow,....	10
Best bull calf,.......	6	Best heifer calf,......	6

CLASS II.—*Durham Cattle.*

Best bull, 3 years old, $15 | Second best,.........$10
Third best, diploma.
Best bull, 2 years old, $10 | Second best,......... $5
Third best, diploma.
Best yearling bull,....$10 | Second best,......... $5
Third best, diploma.
Best bull calf,....... $5 | Best cow, 3 years old, $15
Second best,.....diploma. | Second best,.........$10
Third best, diploma.
Best heifer, 2 y'rs old, $10 | Second best,......... $5
Third best, diploma.
Best yearling heifer,..$10 | Second best,......... $5
Third best, diploma.
Best heifer calf,...... $5 | Second best,.....diploma.

CLASS III.—*Herefords.*

Best bull, 3 years old, $15 | Second best, 2 vols. Trans.
Third best, diploma.
Best bull, 2 years old, $10 | Second best, 2 vols. Trans.
Third best, diploma.
Best yearling bull,.... $6 | Second best,...vol. Trans.
Third best, diploma.
Best bull calf,....... $5 | Best cow, 3 years old, $15
Second best,.....diploma. | Second best, 2 vols. Trans.
Third best, diploma.
Best heifer, 2 y'rs old, $10 | Second best, 2 vols. Trans.
Third best, diploma.
Best yearling heifer,.. $6 | Second best,...vol. Trans.
Third best, diploma.
Best heifer calf,...... $5 | Second best,.....diploma.

CLASS IV.—*Devons.*

Best bull, 3 years old, $15 | Second best,.........$10
Third best, diploma.
Best bull, 2 years old, $10 | Second best,......... $5
Third best, diploma.
Best yearling bull,...$10 | Second best,......... $5
Third best, diploma.
Best bull calf,....... $5 | Second best,.....diploma.
Best cow, 3 years old, $15 | Second best,.........$10
Third best, diploma.
Best heifer, 2 y'rs old, $10 | Second best,......... $5
Third best, diploma.
Best yearling heifer,..$10 | Second best,......... $5
Third best, diploma.
Best heifer calf,...... $5 | Second best,.....diploma.

CLASS V.—*Ayrshires.*

Best cow,...........$15 | Second best,.........$10

CLASS VI.—*Crosses of Native and Improved.*

Best cow, 3 years old,	$12	Best heifer, 2 years old,	$9
Second best,.........	8	Second best,..........	6
Third best,...	vol. Trans.	Third best....	vol. Trans.

CLASS VII.—*Native Cattle.*

Best cow, 3 years old,	$12	Best heifer, 2 years old,	$9
Second best,.........	8	Second best,..........	6
Third best,...	vol. Trans.	Third best,...	vol. Trans.

CLASS VIII.—*Dairy Cows of any Breed.*

For the best dairy cow, from which shall have been produced in thirty successive days, the greatest quantity of butter—quality as well as quantity considered—which shall be exhibited at the time,........$15
For the second best,..$10 | For the third best,...dip.

The manner of feeding the cow, the management of the milk, and the method of making the butter, with the time it was made, the breed of the cow, if known, and the time after calving, must all be accurately stated in writing. The cow and the butter to be exhibited at the time, with certificates from the person or persons who milked, managed the cream, and prepared the butter.

Working-Oxen and Steers.

Best over 4 years old, $15	Third best,...vol. Trans.
Second best,......... 10	Fourth best,.....diploma.

Best 3 yoke of oxen or steers 2 years old, belonging to one person, $15.

Second best,.........$10	Third best,......diploma.

Best ten yoke of oxen from any one town,........$20

Best yoke of steers, 3 years,..........$15	Second best,.........$10 Third best,......diploma.

[In awarding these premiums, particular reference will be had to the matching, training, and docility of the animals, as well as their general appearance.]

Best yoke of steers, 2 years,...........$8	Best yoke of steers, 1 year,..........$10
Second best,...vol. Trans.	Second best,.....diploma.
Third best,......diploma.	

Fat Cattle.

Best yoke,..........$20	Second best,.........$15

Third best, $10.

Best fat ox,.........$15	Second best,.........$10

Third best, vol. Trans.

Best fat cow or heifer, $15	Second best,.........$10

Third best, vol. Trans.

☞ A fat ox taking a premium as one of a pair, can not compete singly for another premium.

HORSES.

Best stallion, 4 yrs. old, $20	Best breeding mare,..$20
Second best,......... 10	Second best,......... 10
Third best,....vol. Trans.	Third best,......diploma.
Fourth best,.....diploma.	Best mare, 3 yrs. old, $10
Best stallion, 3 yrs. old, $15	Second best,...vol. Trans.
Second best,......... 10	Third best,......diploma.
Third best,......diploma.	Best pr. matched farm, $10
Best pair matched,...$10	Second best,...vol. Trans.
Second best, 2 vols. Trans.	Best pr. market horses, $10
Third best,......diploma.	Second best,...vol. Trans.

Best gelding horse,...$10—Second best,...vol. Trans.

The variety of horse which possesses size, strength, and endurance for field-labor, combined with that action which qualifies for the carriage or saddle—in short, the "horse for all work"—is probably the most profitable class which our farmers can now engage in rearing; and to such, therefore, will the preference of the society be given. Horses taking premium in pairs, can not compete singly for the premium for geldings.

SHEEP.

Class I.—*Long Woolled.*

Best buck,..........$10	Best pen of 5 ewes,...$10
Second best,......... 5	Second best,......... 5
Third best,......diploma.	Third best,......diploma.

Best pen of five lambs, $5.

Class II.—*Middle Woolled.*

Best buck,..........$10	Best pen of 5 ewes,...$10
Second best,......... 5	Second best,..........$5
Third best,......diploma.	Third best,......diploma.

Best pen of five lambs, $5.

Class III.—*Fine Woolled.*

Best buck,..........$10	Best pen of 5 ewes,...$10
Second best,......... 5	Second best,......... 5
Third best,......diploma.	Third best,......diploma.

Best pen of five lambs, $5.

Class IV.—*Fat Sheep.*

Best,..............$10	Second best,..........$5

Third best, vol. Trans.

Applicants for the premiums on fat cattle and sheep, must furnish statements of the manner of feeding the animals, and the kind, quantity, and cost of the food.

The term "long woolled" is designed to include the Leicesters, Lincolns, Cotswolds, and all the English varieties of sheep which furnish the quality of wool suitable for combing—"middle woolled" includes the South Down, the Norfolk, Dorset, Cheviot, Native, &c.—the "fine woolled" includes the Spanish and Saxon varieties of the Merino, and some of their crosses.

SWINE.

Best boar, over 10 mo., $10	Best sow,...........$10
Second best,......... 5	Second best,.......... 5
Third best,......diploma.	Third best,......diploma.

Best lot of pigs under 10 months, not less than 4 in number, $5—Second best, diploma.

In awarding premiums on hogs, reference will be had not merely to size or present condition, but that proportion between bone and meat which promises the greatest value from the least amount of feed.

FARM IMPLEMENTS,

Best plow,..........$15	Second best,.....diploma.
Second best, silver medal.	Best drill barrow,.....$5
Third best,......diploma.	Second best,...vol. Trans.
Best subsoil plow,....$10	Best farm horse cart,.. 5
Best dynamometer,... 20	Best ox-cart,.......... 5
Best farm wagon,.... 10	Best horse-rake,....... 5
Second best,...vol. Trans.	Second best,...vol. Trans.
Best half dozen hand rakes,......diploma.	Best half dozen grass-scythes,....diploma.
Best grain cradle,.... 3	Best half dozen cradle-scythes,....diploma.
Second best,.....diploma.	
Best half dozen hay-forks,......diploma.	Best half dozen dung-forks.......diploma.
Best harrow,........ 5	Best threshing machine, 15
Second best,...vol. Trans.	Second best,...vol. Trans.
Third best,......diploma.	Third best,......diploma.
Best fanning-mill, silver medal.	Best straw-cutter, silver medal.
Second best,...vol. Trans.	Second best,...vol. Trans.
Third best,......diploma.	Third best,......diploma.
Best improved ox-yoke, 5	Best clover-machine,..$10
Second best,.....diploma.	Second best,.....diploma.
Best cultivator,....... 5	

Best flax and hemp-dressing machine, $10.

Articles not presenting any new and valuable improvements, will not be entitled to premiums. Implements and machines must be tested as far as possible, in the presence of the committee.

DAIRY.

BUTTER.—*Not less than 50 pounds.*

Best sample,........$15	Fourth best, silver medal.
Second best, silver medal.	Fifth best,... " "
Third best,... " "	Sixth best,... " "

CHEESE.—*Not less than 100 pounds.*

Best sample,........$15	Fourth best, silver medal.
Second best, silver medal.	Fifth best,.... " "
Third best,... " "	Sixth best,.... " "

The butter offered for premiums must be presented in butter-tubs, jars, or firkins.

The claimants for premiums must state in writing the time when it was made; the number of cows kept on the farm; the mode of keeping; the treatment of the milk and cream before churning; the mode of churning, winter and summer; the method of freeing the butter from the milk; the quantity and kind of salt used;

whether saltpetre or any other substances have been employed.

Those who present cheese for the premiums offered, must state in writing the time when it was made; the number of cows kept; whether the cheese is made from one, two, or more milkings; whether any addition is made of cream; the quantity and kind of salt used; the quantity of rennet used, and the mode of preparing it; the mode of pressure, and the treatment of cheese afterward.

MAPLE SUGAR.

Best sample, 15 lbs...$15
Second best,....Diploma.

CORNSTALK SUGAR.

For the best experiment in the manufacture of sugar from cornstalks, from one acre of northern corn cultivated for the purpose, so as to obtain the greatest quantity of sugar, $25.

The process of manufacture and clarifying must be particularly stated in reference to the maple and cornstalk sugar.

SILK.

Best specimen manufactured,............$15
Second best,......... 10
Third best,.......... 5
Fourth best,.. vol. Trans.
Best pound reeled silk, 10
Sec. best lb. reeled silk, $5
Third best, ...diploma.
Best half bu. cocoons, 1844,.......... 10
Second best,......... 5
Third best, ...diploma.

DOMESTIC MANUFACTURES.

Best woollen blankets, $5—Second, 4—Third, 3.
Best ten yards flannel, $5—Second, 4—Third 3.
Best 10 y'ds woollen cloth, $5—Second 4—Third,3.
Best woollen carpet, $5—Second, 4—Third, 3.
Best tow cloth, 15 y'ds, $1—Second, diploma.
Best 10 yards linen,$5—Second, 4—Third, 3.
Best 10 y'ds linen diaper, $5—Second, 4—Third, 3.
Best hearth-rug, $5—Second, 4—Third, 3—F'th, 2—Fifth, 1—Sixth, diploma.
Best ten yards kersey, $3—Second best, 2—Th'd, 1.
Best rag carpet, 15 y'ds, $3—Second, 2—Third, 1.
Best double carpet coverlet, $4—Sec'd, 3—Third 2—Fourth, 1.
Best pair woollen knit stockings, $2—Second, 1—Third, diploma.
Best wove woollen stockings, $2—Second, 1, Third, diploma.
Best cotton wove stockings, $2—Second, 1—Third, diploma.
Best lb. of linen sewing-thread, $2—Second, 1—Third, diploma.
Best linen woven stockings, $2—Second, 1—Third, diploma.
Best linen knit stockings, $2—Second, 1—Third, diploma.
Best knit cotton-stockings, $2—Second, 1—Third, diploma.

VEGETABLES.

For 6 best stalks Celery, ...$2
3 best h'ds cauliflower, 2
3 best heads broccoli,.. 2
12 best white table turneps,............ 1
12 best carrots, ... 1
12 best table beets,.... 1
12 best parsneps,...... 1
12 best onions,........ 1
3 best heads of cabbage, 1
12 best tomatoes,...... 1
2 best purple egg-plants,$1
Best h'f p'k Lima beans 1
Best " Windsor do. 1
Best bunch double parsley,............. 1
3 best squashes,....... 1
Largest pumpkin,..... 1
12 best ears seed corn, 1
Best half peck table potatoes, ... 2
Second best,.......... 1
Best variety seedling, do. 5

Discretionary premiums will be awarded on choice garden products not enumerated above.

FRUITS.

For the greatest variety of table Apples, $5.
For the second greatest, $3
For the third do., vol. Tr.
For the best 12 sorts, not less than three of each, $3.
Best new seedling Apple, $5.
For the greatest variety of table Pears, $3.
For the the second greatest,.......Vol. Transactions.
For the greatest variety of winter Pears,.. "
For the best twelve Quinces,............ "
For the best twelve Peaches,............ "
For the best twenty-four Plums,.......... "
For the best six bunches of native Grapes, "
For the best six bunches of foreign Grapes, "

FLOWERS.

For the greatest variety and quantity, $5.
For the sec'd greatest, $3
For the third do., vol. Tr.
For the best Floral Ornament, $5.
For the second best,...$3
For third do, vol. Trans.
For best s'dl'g Dahlia, $3
For the second best,... 2
For the best twenty-five varieties of Dahlias, $5.
For the second best,...$3
For third do. vol. Trans.

PLOWING MATCH.

First premium,......$15
Second premium,..... 12
Third premium,......$10
Fourth premium, ... 6
Fifth premium, diploma.

Each competitor will be required to plow one fourth of an acre of sward land in 75 minutes; the furrows not to be less than 12 inches wide and 6 deep—the plowman to drive his team.

FIELD CROPS.—(*At Winter Meeting.*)

Best crop of wheat not less than two acres, $15.
Second best,.........$10
Third best, 2 vols. Trans.
Best two acres of spring wheat, $15.
Second best,.........$10
Third best, 2 vols. Trans.
Best crop of Indian corn, not less than two acres, $15.
Second best,.........$10
Third best, 2 vols. Trans.
Best crop of Barley, not less than two acres, $10.
Second best,..........$5
Third best,...vol. Trans.
Best crop of Rye, not less than two acres, $10.
Second best,..........$5
Third best,...vol. Trans.
Best crop of Oats, not less than two acres, $10.
Second best,..........$5
Third best,...vol. Trans.
Best crop of Potatoes for table, not less than 1 acre, $10.
Second best,..........$5
Third best,...vol. Trans.
Best crop of Potatoes, quantity considered, not less than one acre, $10.
Second best,..........$5
Third best,...vol. Trans.
Best crop of Sugar Beets, not less than half an ac., $10.
Second best,..........$5
Third best,...vol. Trans.
Best crop of Mangel Wurtzel, not less than half an acre, $10.
Second best,..........$5
Third best,...vol. Trans.
Best crop of Ruta Baga, not less than one acre, $10.
Second best,..........$5
Third best,...vol. Trans.
Best crop of Carrots, not less than one acre, $10.
Second best,..........$5
Third best,...vol. Trans.
Best crop of Peas, not less than one acre, $10.
Second best,..........$5
Third best,...vol. Trans.
Best acre of corn for fodder, sown broadcast, $5.
Best half acre of hops, $5
Best " " flax, 5
Best h'f ac. of tobacco, $5
Best acre of cabbage, 5
Best acre of broom-corn, $5.

Those who present claims to premiums for farm crops, must state in writing the following particulars: The condition of the soil at the commencement of cultivation for the crop; the previous crop and cultivation, and the quantity of manure used upon it; the quantity and kind of manure the present season; the quantity and sort of seed used; the time and manner of sowing, cleaning, and harvesting the crop; the amount of the crop determined by actual weight or measurement; and the expense of cultivation. The land shall be measured by some sworn surveyor, and the claimant of the premium, with two other persons who assisted in measuring, shall certify under oath as to the quantity produced from the piece of land mentioned in the certificate of the surveyor.

DISCRETIONARY PREMIUMS,

Will be awarded for such implements, products, &c., not enumerated, as shall be deemed worthy of notice or encouragement.

COMPETITION FROM OTHER STATES.

Premiums in form of silver medals, open to competition from other states, will be given

For the best bull and cow of any breed—Second best, 2 vols. Transactions.

For the best yoke of working-oxen—Second best, 2 vols. Trans.

For the best pair of fat cattle—Second best, 2 vols. Trans.

For the best pair of matched horses—Second best, 2 vols. Trans.

For the best pen of 5 fine-woolled ewes—Second best, 2 vols. Trans.

For the best fine-woolled buck—Second best, 2 vols. Trans.

REGULATIONS.

The premiums for essays and agricultural implements, will be open to citizens of other states; all others will be confined to residents of this state, who are members of this society, or who may become so by the payment of one dollar on entering their articles.

The trial of plows will take place at Poughkeepsie, on Monday, the 16th day of September.

No premiums will be paid on any animals or articles taken away before the close of the fair.

Premiums not claimed within four months after they are awarded, will be considered as donations to the society.

All persons who intend to exhibit cattle, horses, sheep, or swine, should give notice to Thomas L. Davies, Poughkeepsie, or Henry O'Reilly, recording secretary, Albany, previous to the 10th of September, that the necessary arrangements may be made for their accommodation—and all animals must be on the ground by 9 o'clock, A. M., of the 18th September.

All those who intend to compete for the premiums on agricultural implements, butter and cheese, sugar, cocoons, silk, &c., should have their specimens on the ground on the 17th, that they may be deposited in their appropriate places, and the rooms suitably arranged on the day previous to the fair.

Applicants for premiums are requested to pay particular attention to the notes attached to the premiums on dairy cows, fat cattle, and fat sheep, butter, and cheese, field crops, maple sugar, &c.

The statements required from those who compete for field crops, must be sent to Henry O'Reilly, recording secretary, Albany, previous to the 1st of January, 1845, and the premiums will be awarded at the annual meeting of the society, on the third Wednesday of January.

Competitors for the premiums on essays, must forward their manuscripts to the recording secretary, Albany, previous to the 1st of January, 1845, free of postage.

No premium will be awarded, unless, in the opinion of the judges of the class in which it is offered, the animal or article is worthy of such premium.

Prize-animals and implements at the previous exhibitions, will be allowed to compete for the prizes: but they must receive a higher prize, or in a different class, to entitle them to a premium. Should the same premium heretofore given them be awarded, they will receive a certificate to that effect, instead of the prize.

Animals and other articles offered for competition, must be labelled with the names and residence of the owners at full length.

CIRCULAR.

State Agricultural Hall, Old State House, Albany, Feb. 1844.—The State Agricultural Society now occupy the Hall in the old State House, contemplated by the concurrent resolutions of the last legislature. The hall is the easterly one on the first story (that formerly occupied by the comptroller)—the remainder of the edifice being occupied, as this room is yet partially occupied, by the State Geological Collection.

Officers and members of county societies, and friends of agriculture from other states as well as this, are invited to visit the hall when passing through Albany; and agricultural committees of the Senate and Assembly, as well as the committees of the Society itself, will find the hall ready for their reception at their evening meetings. The returns which county societies are required by law to make to the State Society, and other communications touching the farming operations in the several counties, may be left at the hall in charge of the recording secretary; and all premiums awarded by the society, or any other claims upon it, will be paid on presentation there to the treasurer, Thomas Hillhouse.

It is the desire of the New York State Agricultural Society to maintain correspondence and exchange publications with similar societies in other states and nations; and communications are respectfully invited from practical farmers and horticulturists, and from the friends of science and art generally, in reference to any of the varied relations of agriculture in its connexion with private happiness and public prosperity.

The officers of the county agricultural societies, secretaries especially, are respectfully requested to forward to the state society information respecting the operations of those societies, and of their executive committees, together with the names and residences of officers elected; and also any newspapers containing articles calculated to promote the interests of the farming community, and to realize the expectations which influenced the legislature when passing the beneficent law of 1841 for the encouragement of agriculture. Those officers are likewise requested to call on the editors in their several counties, with a request for the publication or notice of the premium list offered by the State Agricultural Society, with the view of exciting wide-spread attention to the next annual State Fair which is to be held in Poughkeepsie, on the 18th and 19th of September. Gentlemen to whom copies of this circular are addressed, are requested to solicit an insertion in the agricultural department of the newspapers in their respective counties; and also to post a copy of it at the neighboring postoffice or in some other public place.

As it is the purpose of the State Society to carry into immediate effect the project of forming an *Agricultural Museum*—a collection that will embrace all attainable varieties of articles interesting to the farming community—the friends of agricultural improvement, many of whom have often manifested willingness to contribute to this object by the donation of suitable specimens (and the wide range of the society renders it expedient to make the collection as comprehensive as possible,) are requested to forward their contributions as soon as practicable.

The makers of new or improved agricultural implements—the farmers and planters in this and other states who desire to disseminate information in reference to their operations in stock or grain or other agricultural products—the friends of horticulture and the domestic arts—as well as the publishers of agricultural journals in this and other states—are respectfully requested to lend their influence in promoting the purposes of the State Society, in reference to all or any of the above-mentioned projects. The owners of improved breeds of horses and cattle may also find the state agricultural hall a suitable place for exhibiting portraits of animals of the several varieties of stock.

Specimens in every department of natural history and science, will be acceptable as contributions for the agricultural museum.

Contributions of any kind, in furtherance of the specified objects, may be forwarded by the express or transportation lines direct to Albany, or may be made to either of the following officers of the society, viz: John P. Beekman, President, Kinderhook, Columbia county; James Lennox of New York; Thomas L. Davies of Dutchess; J. B. Nott, Thomas Hillhouse, or J. M'D. M'Intyre of Albany; George Vail and Alexander Walsh of Rensselaer; Henry S. Randall, Cortland; Rawson Harmon of Monroe; B. P. Johnson of Oneida; E. Kirby of Jefferson; George J. Pumpelly of Tioga; John Savage of Washington; Joel Rathbone, Luther Tucker, and Ezra P. Prentice of Albany; and the corresponding committees of the State Society, as well as the officers of the County Societies, are respectfully requested to co-operate in furtherance of this design.

The valuable collections in Natural History, resulting from th[illegible]tate Geological Survey, are all contained in the apartments adjoining the Agricultural Hall in the old State House: and the public generally—not merely the friends of science, but the political economists and the business men who are desirous of tracing the connexion of the geological survey with the agricultural and other industrial interests of the community—may find ample repayment for the time employed in the examination.

HENRY O'REILLY, *Recording Sec'y, Albany.*

At a meeting of the Executive Committee, in the city of Albany, on Thursday the 15th of February, 1844—JOHN P. BEEKMAN, of Columbia, President of the State Society, in the chair:

After the usual preliminary business, the subject of causing a more general publication of the Premium List was mentioned, with a view of exciting greater attention to the State Fair next fall.

And, on motion of Mr. Vail, of Rensselaer, the recording secretary was directed to request the corresponding committees to call upon editors in their respective counties, for the purpose of procuring an insertion of that list, as a matter of general interest to the farming community.

Mr. Nott of Albany county, offered a resolution, which was adopted, directing the same officer to request the editors of agricultural and other journals, to call attention to the fact, that the premiums on agricultural implements and essays, and a certain portion of the premiums offered for horses and cattle, are *open to competition from other states.*

It was also resolved, on motion of Mr. Nott, that certain "premiums open to competition from other states," whether awarded in the form of medals or otherwise, be made equivalent to the cash premiums offered on animals confined to the state of New York—(horses and *fat* and *working* cattle being left with premiums already designated.)

Mr. McIntyre of Albany, suggested a correction, which was made accordingly, in the premium list,—providing that, in the several varieties of sheep, a pen of five ewes, instead of a single ewe, be required for the premiums offered.

Mr. Vail moved, and the motion was approved, that, whenever *age* is specified for an animal in the premium list, the term be understood as including all *over* that age.

The President called attention to the propositions for legislative aid to establish an agricultural college and pattern-farm:

And Mr. Walsh of Rensselaer county moved that a committee be appointed to consider the various propositions suggested; and to report at the next meeting of the executive committee—taking such action meanwhile as circumstances may require.

Mr. Rathbone of Albany, moved that the recording secretary be directed to communicate with the Poughkeepsie committee in reference to the reservation of suitable grounds for the plowing-match, as well as the state fair—with the view of temporarily securing several locations, from which selections may be made before the land is required for spring crops—the ground for the plowing-match to contain at least thirty acres—and to be selected, together with the ground for the fair, early in the spring, when the meeting of the executive committee may be held in Poughkeepsie, for those and other purposes.

Mr. Walsh moved that a committee of five, of which the president should be chairman, be appointed to call upon the state officers immediately, and ascertain what portion of the old State House can be assigned to the State Agricultural Society, under the concurrent resolutions of the last legislature. The committee, consisting of the President, and Messrs. Rathbone, McIntyre, Walsh, and Nott, reported during the day, that the hall on the first story, formerly occupied by the comptroller, had been designated for the future uses of the State Agricultural Society, and the recording secretary was directed to have that hall immediately arranged for the purposes of the society, and to give public notice of the fact—which direction has been complied with.

On motion of Mr. Nott, a committee of three was appointed to examine the essay accompanied by a statement of experiments made by Marcus Adams of Monroe county, in reference to the manufacture of sugar from cornstalks. [It may be proper to remark that the experiments have been made on such a scale as to enable Mr. Adams to declare that he "*sees no good reason why the manufacture of sugar may not become as universal as the raising of corn*"—inasmuch "as every neighborhood can as easily be supplied with its apparatus for making sugar as for making cider."] The committee consists of Messrs. Nott, Hillhouse, and Rathbone.

A communication was then read from the Massachusetts Society for the Promotion of Agriculture, which was addressed to James S. Wadsworth, late president of this society. The communication proffered a donation of the volumes of the "Transactions," published formerly by that society, &c.

On motion of Mr. Nott, the secretary was directed to send to the Massachusetts Society a series of volumes of Agricultural Transactions of the State of New York, together with a letter acknowledging the courtesy of that society, and desiring a regular continuance of correspondence therewith.

It was also resolved, on motion of Mr. Nott, that copies of the "Transactions" of the New York State Agricultural Society, be sent by the same officer to the National Agricultural Society, and to all the State Agricultural Societies in the Union, with a request for exchanges from those societies.

Mr. Walsh moved, and the motion was approved, that the committee already raised in reference to certain agricultural projects before the legislature, be directed to memorialize that body for an appropriation to this society of such unclaimed quotas of money as were set apart by the law of 1841 for the promotion of agriculture.

On motion of Mr. Nott, it was ordered that the president and recording secretary be authorized to transmit copies of the "Transactions" of this society to distinguished agriculturists in other states and nations, accompanied with requests for such communications and publications as those gentlemen may think proper to furnish for promoting attention to agricultural improvements in this state.

On motion of Mr. McIntyre, the treasurer, Mr. Hillhouse, was authorized to pay all premiums and other demands against the State Agricultural Society—said demands to be presented at the hall of the society.

On motion of Mr. Walsh, the recording secretary was directed to procure suitable books, &c., for preserving the records, &c., of the society.

And on motion of Mr. Rathbone, he was also directed to procure suitable furniture for accommodating the members of the executive committee and of the society at the meetings in the Agricultural Hall.

Mr. Nott added a resolution directing the same officer to take charge of the books and other property of the society, and to make a catalogue of all the articles.

In reference to the financial affairs of the society and the arrangements for the means required for the premiums and other expenses of the next fair, some conversation occurred, in which Messrs. Walsh, Nott, Tucker, Prentice, and other gentlemen participated; when the subject was laid over till the next meeting.

On motion of Mr. Walsh, it was resolved to hold regular monthly meetings of the executive committee, on the second Thursday of each month, at 10 in the forenoon; and that the secretary notify all the members, and also request the attendance of the late members of the executive committee as far as practicable, pursuant to the resolution of Mr. Nott for inviting the ex-officers of the society to meet with the executive committee.

In reference to a communication of Mr. Bergen of Brooklyn, touching certain alleged improvements in plows, (submitted through Mr. Walsh,) Mr. Rathbone moved that the recording secretary inform Mr. B. that it will afford the society satisfaction to see the qualities of his plows tested at the next state fair in Poughkeepsie.

Mr. Walsh made some remarks on the propriety of taking measures for establishing an *Agricultural Museum and Library*, and proposed that a committee of three be appointed to aid in carrying out the project. The committee accordingly appointed, consists of Messrs. Walsh of Rensselaer, E. P. Prentice of Albany, and James Lennox of New York.

Mr. D. Lee of the Assembly, in reply to inquiries, made some observations on the nature of projects contemplated by legislative action for promoting agriculture—explaining the subjects brought before the committee of the Assembly, of which he is chairman.

The opinion was then confidently expressed by the president, Mr. Walsh, and other gentlemen, that the liberal spirit now aroused among the friends of agriculture, will promptly respond to any reasonable "conditions precedent" to legislative encouragement for promoting that essential interest of the state.

The recording secretary read several communications received from different quarters since the last meeting. He also mentioned the satisfactory results already flowing from the means employed to arouse attention to promptness and accuracy on the part of sundry county societies, from which returns had not been received quite as speedily and explicitly as they ought to have been. [The difficulties in this respect were doubtless occasioned, in some degree at least, by the changes occurring in the officers of societies about the time of the year when returns should be made—the old officers supposing that their successors would discharge the duty, and *vice versa*. The attention now turned to the matter will prevent a recurrence of the difficulties, and ensure rigid compliance with the requirements of law.]

Some discussion then ensued on the best means for realizing all reasonable expectations of the friends of agriculture, so as to justify a continuance and increase of legislative favor toward the state and county agricultural societies. The matters brought in review were laid over for further consideration at the next meeting.

On motion of Mr. Walsh, the recording secretary was ordered to publish in the agricultural journals of the state, in the state paper, and in such other papers as will devote space for the purpose, abstracts of the proceedings of this executive committee.

And then the committee adjourned till the second Thursday of March.

It is the intention of the executive committee to hold an *evening session*, after despatching the regular business of the society during the day, commencing at 10 o'clock. A. M. The evening meetings, which will be held in the Society's Hall in the Old State House, are designed chiefly for the hearing of correspondence and essays, and of remarks from friends of agriculture, whether members of the society or not. The object is to promote the cause by bringing together occasionally, for free conversation, the friends of agriculture and horticulture, including the agricultural committees of the Senate and the Assembly, and such other legislators and strangers as may be in Albany at the time of holding the meetings, &c.

HENRY O'REILLY, *Rec. Sec'y.*

SOUTHERN CALENDAR FOR MAY.

MUCH of the work for this month is influenced not only by the good management of the farmer in cleaning such portion of his crop as demands it, but by the quality of the plowing, done previous to planting.

The month of May is considered the most important of the whole year, when we take into view the cultivation of a growing crop; because much of the future labor is depending on the quality and quantity of work done now. If done well, as it should be, the crop will not become foul so soon, and if much of it be done, the husbandman will be able to receive his return so much the earlier.

The cotton plants must be cleaned out as early as possible, with the turning-plow, after the first leaves are developed. Throw the earth from the plants, leaving a portion of the bed, which must be thoroughly cleaned, whether it be covered with weeds or not. Make it your object to return to your cotton-fields as early as possible, not exceeding a week. Run around through the rows again with a bull-tongue plow, and at the same time plow deep near the plants. A few days after plowing draw the earth around the stems with a hoe. If this second working be done early, and the plants be left in good condition, you will find much of your after-work comparatively easy. Before the end of the month, the plants will be large enough to dirt with a large shovel-plow, which should be now used, and the entire middle broken out deep and thoroughly.

Keep your corn-fields in good order, and at the second plowing, drop peas, ten to fifteen in number, between the hills of corn, so that the plow will cover them, and you will "*kill two birds with one stone.*" See that your cane-fields are kept clean; and that your tobacco-plants are not eaten by worms. If previously neglected, rice may be sown this month. As large crops, however, can not be expected from it as if planted in March or April.

When cane has grown about 18 inches high, a small quantity of earth should be drawn back to the plant; and in the course of the two succeeding dressings a bed should be formed for them five or six inches in depth. In new lands, notwithstanding the weeds, much less hoeing is done on account of the luxuriance of the cane.

Most of the winter grain that was sown in October will require cutting this month. That to be used for feeding stock should be cut just before it begins to turn yellow, and that for seed, leave until fully ripe.

Those who have bedded out their sweet potatoes, must set out the drawings every rain, having ridges or hills already prepared.

Silk-worms will have wound their cocoons from the 1st to the 20th of this month. Those you wish to reel, put in the hot sun a day or two, or place them in a close vessel, with a little gum camphor, in order to kill the chrysalides, and they can be reeled at leisure. Those intended for producing eggs for the next crop, must be selected and placed on a moist paper, in a cool dark room.

The garden is an indispensable requisite, and all that is necessary, at this season, is to keep it clean, well-stirred, or to sow occasionally endive, or cabbages for fall; radishes, lettuces, and peas, so as to give a succession of these vegetables. Keep them well watered in dry weather, and protect them by shade, if necessary.

NORTHERN CALENDAR FOR MAY.

The whole force of the farmer will be required this month; his manure, if any remain, must all be carted out, all his land plowed, and his crops in, except some potatoes and ruta bagas. The best fresh manure for the meadow, is a well-mixed compost. All the new barn-yard manure should be scattered over the ground before plowing, and plowed under, and if any of it is too long to be turned in conveniently, let it be placed in the furrow with a fork and covered by the succeeding furrow-slice. It is a common error to manure in the hill. This ought seldomly to be done. If the land is well pulverized, as it always ought to be, the rootlets of the plants will find their proper food, if planted within suitable distances; and instead of the manure yielding all its nutriment to the young plant, it will be thus held in reserve to be given up as required during the whole growth of the season. Corn, perhaps, is the most important crop in the United States, and is particularly deserving the farmer's attention. It is computed by Mr. Ellsworth, that the crop of 1842 exceeded 441,000,000 bushels, which is, perhaps, an overestimate. The stalks of this invaluable grain are, in many parts of the country, worth the expense of cultivation, thus leaving the whole crop of grain for profit and the use of the ground. To produce the best seed and cultivate properly, is surely, then, a great object for the farmer. A rich soil should be used, sufficiently dry, and well pulverised. Mr. Young of Kentucky, who has raised the astonishing amount of 190 *bushels of shelled corn to the acre*, says he plows his land in the fall, cross-plows it in the spring, and plants from 8 to 12 grains in each hill, at a distance of three feet apart each way; covering 6 inches deep. As soon as the corn is up, he starts a large harrow with a double team directly over the rows of corn, letting the horses walk in the adjoining furrows. A few days after, he plows with the bar next the corn. This again completely stirs the soil. He then thins to four stalks in a hill, and plows three times more. The choicest kinds of corn only ought to be used for seed, and if steeped in a strong solution of saltpetre before planting, it will protect it from crows and grubs, and give it an early and rapid start. Potatoes are a very important crop, and as they furnish so large a share of our vegetable food, it is of great consequence to get the best seed, which may be such as give a good yield, and afford a solid, mealy root, of pleasant flavor when boiled. In dry land they may be planted in furrows; if cold or wet, they should be planted on ridges. Rich land is best suited to them. Meadows should now have attention. When the waste of the barn, or house, or roads, can be led to them, they will be found to thrive very much from it. Where the meadows have been laid down long in grass, the roots should be particularly examined, and if found thin or mossy, and the sod hard, a fine compost ought to be spread on it, at the rate of eight to sixteen loads per acre; then grass-seeds of the kind required. Then harrowed with a fine, sharp-toothed harrow. Ashes are peculiarly suited to grass-land, as potash and its silicate are the principal materials of which the ground is exhausted by this crop, which are contained in them in large proportions. If herds-grass or timothy occupies the ground, it is best to omit the use of plaster. When it is desirable to promote the growth of the clovers, plaster may be sowed freely. If not before done, finish sowing hemp-seed and planting tobacco, and castor beans.

Kitchen Garden.—In the fore part of this month all the early cucumbers, melons, cabbages, cauliflowers, lettuce, radishes, &c., which have been taken out of the hot-bed, removed and transplanted into the open ground. All kinds of table vegetables, as peas, beans, beets, onions, parsnips, carrots, and esculent herbs, should be sown early. Plant Lima-beans in turneps hollowed by scooping out the inside, and place them in a hot-bed, so that you may have this delicious vegetable early. Tomatoes, egg-plants, peppers, &c., can be planted out.

Fruit-Garden and Orchard.—All kinds of fruit and forest-trees and shrubs that have not leaved out, transplant immediately. Spring inoculating may still be performed in the early part of the month. Strawberry beds may also be planted out, and the suggestions in the calendar for April concerning pruning be observed.

Flower-Garden and Pleasure-Grounds.—The borders of the flower-garden should be finished, and perennial herbaceous plants transplanted. Sow seeds of autumnal flowers in seed-beds, to be transplanted at a future time. Set out box-edging early in the month, or it will be liable to suffer from the drought. Trim hedges and shrubs. Give the lawns and pleasure-grounds a top-dressing of ashes or stable manure, and put the gravel walks and carriage-ways in order. This is the best month for transplanting evergreens.

AN AMERICAN HERD-BOOK.

The inconvenience arising from the want of a work of this kind is already greatly felt in the United States, and, with the rapid multiplication of our herds, is continually increasing. There may now be estimated, at least two thousand thorough-bred Short-Horn cattle on this side the Atlantic, distributed in the hands of perhaps five hundred different breeders. These animals, in most cases, have been selected from among the best herds in England, and imported at great expense! and their descendants widely disseminated into every state of our Union and the Canadas. Strict attention has been given to their breeding, and great care bestowed to maintain their original excellence. The climate and soils of America have proved congenial to their growth; and from the rapidity with which they have multiplied, and their present comparative cheapness, we may anticipate that but few further importations will be made from abroad. Still, the decided advantages conferred upon one of the most important branches of agriculture by the introduction of the Short-Horns into this country, have distinctly established them as a race to be perpetuated in their purity; and the progressive improvement in American husbandry is a sufficient guaranty that they will hereafter maintain their exalted character in elevating the standard of American cattle.

So important was it esteemed by the Short-Horn breeders of England to establish and record the lineage of their unrivalled herds, that in the year 1822, the first volume of Coate's Herd-Book was published, containing the pedigrees of over 2,500 animals; and so strongly has the public mind sanctioned the utility of the work,, and its continuance, that three successive supplements have from time to time been issued, and another is now in the press, embracing altogether, a list probably of 12,000 cattle.

In the great mass of these, the American breeder has little interest; although from an absence of domestic record, many of our citizens have encountered the inconvenience and expense of transmitting a list of their herds to England for registry. A moment's reflection will convince us of the absurdity of a perpetual dependence upon foreign records for the pedigrees of American stock; and the great expense of obtaining the entire English Herd-Book, comprising five large volumes, at a cost of not less than $40, are subjects not unworthy of consideration. Add to this, the probability of errors in printing the registry at such a distance, where corrections can hardly be made, together with the possession of no greater assurance for the integrity of the records than may be found at home, and the propriety of at once establishing an American Herd-Book will be apparent.

A work of this kind has long been agitated by various gentlemen connected with cattle-breeding in America; but no one has hitherto ventured the experiment, although earnestly called for by a numerous body of breeders.

Its demand, then, being conceded, it remains to be seen whether the public will sustain an effort to accomplish it. It is a labor involving industry, research, and discrimination; and in its proper execution, demanding no ordinary degree of firmness and decision in resisting undue admissions within its pages. It may, perhaps, be deemed an act of presumption in the undersigned to assume this responsibility; but he can only answer that *some one* must undertake it, if it be undertaken at all; and having been a considerable breeder of Short-Horns for many years, and more or less conversant with most of the principal herds of this country, he considers his observation and experience, together with a familiar acquaintance with the volumes of the English Herd-Book, somewhat of a guaranty for the performance. Be it remembered however, that the task is not assumed without mature reflection, and after the repeated solicitations of several distinguished breeders in different sections of the United States; and if pursued, the co-operation of skilful and experienced individuals will be rendered. But, for the *integrity* of its execution, the undersigned will be solely responsible.

As this work is not proposed in the anticipation of private gain, so neither will it be expected to involve pecuniary loss. It is therefore necessary to ascertain the extent of encouragement which will be given to it before proceeding; and for that purpose the undersigned respectfully asks the publication of this notice by the agricultural press generally in the United States and the Canadian provinces; for which, together with a copy of the paper containing it directed to him, he will present the proprietor with a copy of the work, if prosecuted.

He also requests all who approve the plan to write him, *post paid*, if by mail, previous to the first day of July next, stating the number of animals they propose to register, together with the number of copies they will take. If a sufficient number of responses are made to encourage the undertaking, the work will proceed; if not, it will be given up. The determination of going on with it will be announced through the agricultural papers as early as September next, and those proposing to patronize the work will then be notified to forward their respective registers of cattle immediately, together with the necessary evidence of their correctness, that it may be issued as early as the spring of 1845. As it is not expected that the sales of the book will more than pay for the printing and publication, a small charge for admission will be required, say from twenty-five to fifty cents for each animal as the number may determine.

Well-executed portraits of animals, the plates being furnished by the owners, will be inserted with the register.

The *full* pedigree of each animal will be given, running back through its whole extent in the English Herd-Book, if thus furnished, together with its reference numbers, so as to render the American Herd-Book a *perfect* record of every animal's genealogy.

An index, containing the name and residence of every breeder whose cattle are registered, will be inserted. Another index will contain the name of every animal, and the page on which it is recorded.

The work will also be prefaced with a full and accurate history of the Short-Horn breed of cattle, drawn up from the best English authorities, together with a particular account of their extraordinary productions both in the dairy and at the shambles.

It will be executed, as near as possible, in the style of the English Herd-Book, well bound, and delivered to subscribers at a price not exceeding three dollars a copy, either at New York, Albany, or Buffalo, at their option.

Lewis F. Allen.

Black Rock, N. Y., April, 1844.

We can only say, that we heartily concur in the above proposition, and trust that our correspondent will meet with sufficient encouragement to prepare the work. It is high time now that we had our own national Herd-Book. The number, value, and high-breeding of Short-Horn stock eminently demand this in our country, and every year's delay of the proposed publication is a great detriment to the interests of breeders.

FOREIGN AGRICULTURAL NEWS.

By the arrival of the steamship Acadia, we are in receipt of our European journals to the 4th of April.

Marrets.—*Ashes* were in fair request. *Beeswax*, large sales. *Cotton* was much depressed, and it has fallen since our last full ½*d.* to ¾*d.* per lb. *Flour* has an upward tendency. *Hides* steady. *Provisions.*—In *Beef*, *Pork*, *Bacon*, *Lard*, and *Cheese*, a fair business was doing. *Rice*, small sales. *Seeds* nominal. *Tallow* in good demand. *Naval Stores* a regular inquiry. *Tobacco*, the operations have been large, and yet the article was flat in regard to prices.

Money is still so abundant, that the project of a reduction by the British government of the Three and a Half per Cents, meets with almost universal favor.

American Stocks remain without change.

Reduction of the Duties on Rice and Tobacco in Prussia.—Our minister at the court of Prussia, Mr. Wheaton, has just concluded an important treaty with this government, reducing very considerably the duties on rice and tobacco. It is presumed that all the States of the Germanic Union of Customs will adopt it, and if so, it will have a very important bearing in favor of the interests of our southern and western planters, and cause an increased consumption abroad of these articles of American production.

Increase of Duty on Lard in France.—A bill is introduced into the Chamber of Deputies in France, to increase the duty on lard imported from the United States. We hope so illiberal a measure will not pass, for it is high time that the reciprocal increase of duties was done away with on both sides of the Atlantic.

Durham Cattle in Spain.—In an interesting article on the Agriculture of Spain, contributed by Capt. Weddington of the Navy, for the late number of the Royal Agricultural Society Journal of England, we find that the Vice Consul at Vigo, a wealthy and influential Spaniard, has introduced on to his estate a Durham bull and cow from the stock of Mr. Bates of England. His object in doing this is so to improve his herd, that he can export an improved race of live cattle to London, and thus secure remunerating prices for his animals in the Smithfield market. The estates of many of the Spanish noblemen are very large; from 100 to 800 yoke of working-cattle are frequently found upon them, besides a large number of mules. One farmer sowed last year 10,000 bushels of seed-wheat and 3,000 of barley, and during the civil war he was taxed at one contribution alone, $16,000!

Cultivation of Onions by the Tartars.—Instead of raising them from seeds, in which they do not succeed, or which appears to them too long a process, they dry and smoke in a chimney those which they wish to propagate, and in spring, when the time to plant them is arrived, they cut them diagonally into quarters, but so as not to separate the pieces entirely one from another. They set these onions in rows, when thus prepared, in good soil, well dug, but not freshly manured, at about 10 inches from each other, and two inches deep. These onions increase extraordinarily, and grow large and strong.

Improved Horses.—At the late annual meeting of the St. Austell Club, Mr. Karkeek stated his belief, that there are perhaps as many good horses now as there were 50 years ago; but the number of bad ones had greatly increased. M'Culloch had stated there were 1½ million of horses in Great Britain; and he believed he should not be far wrong in affirming that two out of every ten were not worth the food they consumed. He believed also that 8 good horses would do more work than 10 bad ones. (A member called out, "more than 20.") If by an improved system of breeding, and the introduction of better horses, they could get rid of only one horse out of 10, there would be a saving to the country, in the rearing only, of more than 2,000,000*l.* a year, reckoning the cost at 5*l.* a year; and an equal amount would be saved annually after the rearing to 3 years old, supposing the cost of keeping the horse to be 15*l.* per annum. In reply to Mr. Prater's observations, Mr. Karkeek gave it as his opinion that a two-year old filly was too young to breed from. Her powers were not properly matured. He thought they ought not to breed from a mare under three years old.

Coal Tar as Manure.—A communication was read at the Bath Agricultural Society on the subject of the value of coal tar as a manure. The writer stated that in 1840 he published his experience on the subject; he had now used it as a manure for seven years, and had never found it to fail when properly applied. By means of a water-cart he distributed over his wheat-stubble 180 gallons to the acre, allowing it to remain there two or three months in the autumn before being plowed in. Its cost was a half-penny a gallon; it was economical, and valuable for carrots, turneps, potatoes, and all roots. He had tried it on seeds, but not with equal advantage on wheat. It was very useful on a sandy loam, resting on a marl subsoil; next to that, a deep clay land was best; but its least beneficial effects had been upon soil resting on an oolite formation.

Great Durability of Oak-Timber.—Beams of the oak have recently been taken from houses in England, respectively 527, 808, and 900 years old. The beams are said to have been cut in the winter, and the bark always kept on them, which added to their preservation. Timber cut in the months of May and June, and the bark stripped off, has been found to be most durable in the climate of America.

Pheasants Destructive to Wire-worms.—No fewer than 1225 of these destructive worms were taken from the crop of a hen-pheasant in January last and this was only one day's consumption.

A good Rotation for Garden-Crops.—Celery gives a good preparation for carrots, turneps, parsneps, onions, and early cauliflowers, or for peas, with potatoes and winter-greens, or broccoli between the rows. Autumn-sown onions may be succeeded by spinach, lettuce, &c., and early cauliflower by autumn-onions. Spring-sown onions will be advantageously succeeded by cabbages in beds, with scarlet runners between; and if the cabbages stand all summer and next winter, the ground will come in, in the spring, along with broccoli-ground, from celery, potatoes, and peas, the early potatoes being planted in the trenches, and the peas sown on the ridges.

Wash for Fruit-Trees.—You constantly recommend that fruit-trees should be done over with lime as a wash. Nothing can look more frightful than their glaring conspicuous trunks on a hot summer's day; and to obviate this dissight I use cow-dung, soot, or wood-ashes, mixed up with urine, the drainage of a dung-mix, or ammoniacal-water from the gas-works, to the consistency of thin paint. This composition appears to me to possess all the advantages of the lime, and the trunks of the trees appear lessened, and altogether much more pleasing to the eye.

Sawdust as Manure.—To a large tank connected with the drain from the cattle-yard, the sawdust is carted, and after being saturated in the tank with the drainings of the dunghill for several months, it is thrown out into a heap, and a quantity of lime-shells are mixed up with it—a layer of sawdust and a layer of lime-shells alternately. The wet sawdust slakes the lime, which acts as a stimulus to decompose the sawdust without greatly charring it.

Editor's Table.

Benefit of Agricultural Societies.—In a speech before the Spartanburg Agricultural Society of Georgia, reported in the Southern Cultivator, Mr. Leitner asserts, that thousands of acres of land which were, ten years ago, thrown away and given up, to be disfigured by gullies, as worn out and valueless, are now in a high state of cultivation, and yielding to their owners far heavier crops than they were capable of when first cleared. And the very lands which six years ago would not have commanded, upon an average, five dollars per acre, could not now be purchased for ten dollars per acre; all of which, as every one acquainted with that district will say, is mainly attributable to the influence of the Monticello Planters' Society. With confidence, therefore, I recommend the formation of an Agricultural Society in our district; for just as sure as like causes produce like effects, just so sure will such a society benefit our district.

Mr. Schenck's Cow.—Mr. Knevels is informed, that we have seen animals, with thirty-one thirty-two seconds Durham blood in them, *hornless*. We should be pleased to have him inform us where cows of the "ordinary polled breed," with forms as good as Mr. Schenck's cow, can be seen, for we would like to purchase a few, and will pay a handsome price for them. Put that cow in good condition, and to our eye, she would be anything but a "raw-boned animal." In our humble opinion people generally do not sufficiently accustom themselves to judge of animals from their *anatomy*. Show them a *lean* beast, and it is *raw*-boned and *coarse*—a *fat* one, and it is *fine*, with *smooth* bones! hence the very erroneous decisions upon stock so frequently made at our agricultural shows.

Improved Cultivation of Sugar Cane.—The Planters' Banner says, that Mr. Packwood plants his cane in rows eight feet apart, instead of four or six, the usual distance. The next and most important part of his system, is, that of windrowing his cane-tops and leaves between his rows, and covering them with earth. The object in placing the cane-tops in furrows to decompose, is, of course, to supply nutriment for the succeeding crop.

Old Horses.—The Spirit of the Times says, that there is a very spirited and handsome roadster in this city that is 43 years old; that Mr. Wm. Wincoop of Catskill, has three horses with which he does the work upon his farm, whose respective ages are 36, 38, and 40, making in the aggregate 114 years; and that our best trotters have performed their greatest achievements after attaining the age of 14.

To destroy Bugs on Vines.—Dust the vines with flour of sulphur when the dew is on, and if it gets washed off by the rain, and the bugs again commence their ravages, they must be redusted.

To raise Cabbage-Heads from Stumps.—If cabbage-stumps of any variety are set out in the spring, in good order, one, two, three, or even four good sound heads will grow on them; and this they will do, year after year, until they die by accident. They are managed in the following manner: The upper, narrow-leaved sprouts, which would bear seed, are carefully rubbed off, and likewise all the lower round-leafed ones, which latter will form heads, leaving only so many of these as the strength of the soil and the stump are capable of bringing to perfection. At our cattle-show, Mr. John Drew presented several such stumps, with one to four heads of low Dutch-cabbage on each, which have borne for three years. He sets them out in earth in the cellar, in autumn; cuts off the heads when required for use, and places the stumps pretty thick in the garden in spring. The labor is trifling, the cut worm gives no trouble, and the crop sure and abundant.—*Farmers' Jour.*

Farmers, make your own Candles.—Take two pounds of alum, for every ten pounds of tallow, dissolve it in water before the tallow is put in, and then melt the tallow in the alum-water with frequent stirring, and it will clarify and harden the tallow so as to make a most beautiful article for either winter or summer use, almost as good as sperm.—*Cleveland Herald.*

To prevent Hogs and Cattle being injured in fresh Pea-fields.—The destruction of hogs and cattle, by turning them into fresh pea-fields, is not very uncommon. The remedy, however, is very simple. Stock, immediately before being turned upon a pea-field, should be watered, and at first only be permitted to remain in the field a few hours, when they should be removed to a lot, and have free access to water. After observing this precaution twice or three times, they may be permitted to remain in the pea-field constantly, without danger, if they have free access to water.—*Southern Cultivator.*

The Cotton-Plant—Its nature.—If the object were to consult the dimensions of the roots in spacing cotton to a stand, which probably has been the case heretofore, we would so arrange it that the roots would occupy all the ground; but every one knows that this defeats the object of growing cotton. Then we must resort to some other criterion by which to be governed in the adjustment of the stand and to the length of the limbs. I look with perfect confidence for the best criterion, and that it must be so spaced that the limbs will not interfere with the growth of each other. This affords free ventilation by air and light, which prevents that accumulation of damp mould always met with in crowded cotton. *It prevents rot of every sort*, and the too great division of the means of support furnished by the earth and atmosphere. Now, if my views are correct, they serve to explain the fact why cotton attains greater size in damp situations of humid atmospheres, without proportional advantages of soil, than it does in dry ones.

I have come to the conclusion that the cotton-plant is more akin in its characteristics to the tree than to any other of the vegetable kingdom; and my observations upon both (the cotton-plant and trees) induces me to believe, that the crop of cotton is more abundant always when there is space sufficient to allow of great expansion in the limbs, as the tree is more capacious, more expanded, and a more abundant bearer, where there is room sufficient. In confirmation of this position, go into an orchard of peach or apples, and you invariably find the best fruit and greatest abundance upon those trees which stand apart, with ample room to spread their branches out; and those trees which are crowded are found to have their little crop damaged by blast, mildew, and worms; and the balance of small size, even of fruit that would be large in favorable situations—it is equally so of cotton. I have known the most abundant crops of cotton made on stands that were not at the start deemed more than half sufficient. Then I would take the expansion of the limbs toward each other between the rows as the rule for distance in the drill, because in crowded cotton there are but two sides of the stalks that branch, those toward the rows, making the stalk when grown, in the shape of a fan; and it is attended with less labor in the cultivation, to allow room enough for the cotton to assume the shape of the cone—and to say the least for it, it produces as much fruit or crop. Then improve upon the ordinary method of spacing cotton, by adjusting the distance to the length of the limbs your ground will bear.—*South Western Farmer.*

Great Crops of Wheat.—Mr. Peters states in the New Genesee Farmer, that Mr. Lewis, of Alexander, raised 140 bushels of wheat, weighing 60 lbs. to the bushel, on 2 acres and 70 rods of ground, which would be at the rate of 60 bushels and 3 pecks to the acre. Gen. Harmon, in the N. Y. State Ag. Soc. Transactions 1842, says, in 1803, Mr. Sheffer, of Wheatland, harvested 40 acres of wheat which produced 62¼ bushels per acre.

Mad-Itch.—I know of but one remedy for the mad-itch, and that is surgical. Open the second stomach and extract the cornstalks. This fatal disease among cattle is produced by cornstalks. The fibres being indigestible, hang in the *manifold* or *duodenum*, and irritate and inflame until the poor animal is driven to madness. Farmers feed their hogs upon green corn; the cattle follow and pick up the stalk chewed fine by the hogs, which by superior sagacity he spits out, and this ready-made article does all the mischief, and so it would serve the horses or hogs if they were to swallow it. Separate your cattle from your hogs in cornstalk chewing time, and you will separate your cattle from the mad-itch. An ounce of prevention is worth a pound of cure. Farmers, this is the remedy.

Tenn. Agriculturist.

To remove grease-spots from Merinoes, Silks, Cloth, &c.—Take the yolk of an egg entirely free from the white, mix it with a little warm water (be sure not to scald the egg), and with a soft brush apply the mixture, and rub it on the spot until the grease appears removed or loose. Wash off the egg with moderately warm water, and finally rinse off the whole with clean cold water. Should not all the grease be removed, which may arise from being on a long time, or not sufficiently washed, dry and repeat the operation.—*Southern Cult.*

Egg-Hatching by Artificial Means.—An apparatus for this purpose is now exhibiting in this city, at 160 Nassau street. It takes the egg and goes through the whole process of incubation before visiters.

A New Southern Staple.—We cut the following from the Charleston Courier: An ingenious citizen of the State of New Jersey has recently taken out a patent from the office in Washington, for a discovery which he has made which enables him to manufacture paper of various qualities, and of a very firm and strong texture, from the *cane* which grows in such abundance in the swamp lands of the southern states. The process is to remove the outer coat by a very simple chemical process, when the remainder of the cane is easily converted into a pulp of which the paper is made.

South-Down Sheep for the South.—We understand Mr. Joseph Cope, and Mr. J. Worth of Westchester, Chester county, Pa., recently sent a few of their fine South-Down sheep to South Carolina, and that they are much liked by their purchaser, and find great favor in that quarter. Mr. Cope went out to England a few years since for the express purpose of procuring superior stock, and in addition to South-Down sheep, made an importation of the superb bull Yorkshireman, from the celebrated herd of Thomas Bates, Esq., of Kirkleavington, Yorkshire, England.

To Kill Worms in Peach-Trees.—In the management of my peach-trees, I use one part of saltpetre, to about four to eight parts of common salt, and apply it in its solid state, about half a pound of this mixture to a bearing tree upon the surface of the ground, and in close connexion with the trunk of the tree. I never disturb the earth about the tree—for a long time I applied it three times in the course of the year, though twice, I now think, will answer—I have heretofore applied it in April, June, and first of September—now last of April and first of September.

Of 500 trees, 300 were treated with salt and nitre, and 200 left without its use—those around which the salt and saltpetre were put, were and still continue entirely exempt from worms—of those left without the salt and saltpetre, not one escaped the ravages of the peach-worm. Lyttleton Physick.

American Farmer.

Superiority of Cut-Hay.—Four oxen kept on cut-hay, eat 18 per cent. less than when given the uncut, and made 15 per cent. greater weight of manure, and this manure from the cut hay was thought equal to that from the uncut. Thomas W. Ward.

Mass. Ploughman.

Preserving Corn from severe Early Frosts.—This was done in the month of June, by covering it with earth, and letting it remain for two days till the weather moderated, then uncover. It was large enough at the time for the first hoeing. S. Ellis. *Mass. Ploughman.*

Cane-Coverer recently invented by J. P. Bryan.—If we could convince them that this instrument, in the course of the year, effects a great saving of time, labor, and money, we have no doubt but every one would immediately adopt it. We have the testimony of several sugar-planters of experience, to prove that it is all that it purports to be—that it will, with one boy and two horses, cover *ten acres of cane* per day, in as effectual a manner as the work can be performed with hoes. It is also used instead of hoes, in scraping. We saw several planters at the state fair who assure us of this fact. The instrument was thoroughly tested last spring, and Mr. Bryan now offers it to the public with the fullest confidence. It has been used by Messrs. Barker, Allain, Camp, Mather, Andrews, Col. Hickey, General Trist, and many others.—*Planters' Banner.*

Value of Sulphate of Soda.—The following account of the effect of soda as a top-dressing to beans and peas, is from Professor Johnston's celebrated work on chemical manures:

"The first dressing was applied the 4th of May, on some beans on a border in the garden; the drills that were dressed quickly took the lead of the others. There was no alteration of color, but greater strength, and it *littered wonderfully.* There were five or six stems from every seed sown, and the beans in the pods a great deal larger than the same variety undressed. It was also put upon some of the ridges of the beans in the field, and with the same effect, and gave a very large crop.

"Upon peas in the garden it appeared to add little, if anything, to the strength of the straw, but those that were dressed had a far greater number of pods, and those better filled, and the peas of a better flavor, and *it seems a valuable dressing for all leguminous crops.* When sown in the drills along with the peas, it nearly killed every one of them."

The Pork Trade of Cincinnati.—About 235,000 hogs have been packed the past season at Cincinnati, the average weight of which the Gazette estimates at 210 lbs. each. The price ranged from $2,60 to $2.70 per 100 lbs. The expense of preparing them is $2 per hog, which with the first cost, gives the sum of $1,800,000 invested in the single article of pork.

Farming in Wiskonsan.—Three brothers purchased 300 acres of prairie land in Wiskonsan, 18 months since. It cost them 10*s.* an acre, the fencing $1 an acre, and the breaking up 14*s.* an acre. Every item of expense after harvest shows an aggregate of $2,156. The 300 acres produced 6000 bushels of wheat, which sold for $3,240. This tells a good story for Wiskonsan lands. To pay for land and all improvements the first year, and have a handsome surplus left, is not common hereabouts.—*Rochester Democrat.*

AMERICAN INSTITUTE REPORT, on the Commercial Intercourse of the United States with Great Britain, by their Committee, Messrs. Tallmadge, Chandler, and Williams, January, 1844. This is an octavo pamphlet of only 12 pages, and principally filled with statistics, and yet it is one of the most able arguments in favor of an American Tariff which we have ever read. It presents the subject in a nut-shell, and shows:

1st. That more than one third of the whole of our commerce, both in exports and imports, is carried on with Great Britain.

2d. That all the essential staple productions of this country, comprising forty-seven different articles, are taxed in Great Britain under her *new* tariff, on the market value in New York, a duty of 289 per cent.; which, in fact, make them prohibitory, except for cotton, tobacco, flour, beef, lard, and a few other articles. Under our tariff, the average rate of duties upon articles from Great Britain and Ireland, is only 32 per cent.

3d. As a specimen of Great Britain's "*free trade*" operations, she admits nothing from us *free of duty*, except specie; while we, in 1840, admitted nearly ten millions of dollars worth of different articles from her, without levying a single cent.

4th. Precisely the same system is pursued by Great Britain in favor of her shipping, especially in completely monopolizing for her own vessels, the carrying trade of all our lumber exported to her possessions.

5th. She greatly favors all colonial products by discriminating duties in their favor, and to our prejudice.

6th. The balance of trade against us with foreign countries, from 1831 to 1839, was over two hundred and thirty-five millions of dollars! No wonder that general bankruptcy and ruin should follow throughout the country.

Verily this is an Indian division of "free trade"—all "*turkey*" for foreign nations, and all "*owl*" for the United States.

THE AMERICAN POULTERER'S COMPANION, by C. N. Bement.—We are glad to learn that our publishers, Messrs. Saxton & Miles, are about to issue a work with the above title. It will be highly embellished with numerous wood-cuts most of which are drawn from life. Several of these have already been submitted to our inspection, and we can vouch for their spirit and truth. We have also had the advantage of looking over the MSS. copy of the work, and will say in advance that we highly approve of its contents. Mr. Bement has paid great attention for several years to the subject of poultry, and has clearly and succinctly treated the whole matter.

THE PLOW-BOY, monthly, 8 pages quarto, with handsome illustrations, conducted by A. Randall, Cincinnati, Ohio—price *Twenty-Five* cents a year! Now if the people want a cheap publication here it is—let them hasten and subscribe for it by thousands. When late *Fifty* Cent papers revived again, and others recently started in this state, we foretold a powerful competition for them in that price throughout the country. Here, then, is the beginning, and they will find enough more of them before the year rolls round. Indeed, we have a great fancy to commence ourselves in this way; and if we do, it will be in a rivalry of cheapness not to be despised. Our title shall be the Penny Farmer, *One* Cent a month, or a *Shilling* a year—just the cost of a sizeable paper of smoking-tobacco! But to our subject. The first number of the Plow-Boy indicates that it will be a well-conducted paper, and worth at least ten times its subscription price. Success to it.

Great Sale of Saxony Sheep.—We beg especial attention to the advertisement of the intended sale of the late Mr. Grove's superior Saxon sheep. We have so often spoken of the pure choice breeding, and high merits of these animals, that we deem it unnecessary to add more, than that the public may depend upon them as superior to most flocks in the United States, and perhaps equal to anything in Europe.

Durham Stock for Michigan.—Mr. D. C. Collins of Hartford, Connecticut, has sold his superb Durham bull Hero, to Henry Hall, Esq., of Plainfield, Grand Rapids, Michigan, and he passed through this city on the 22d April, for the residence of his present owner. We expressed our opinion of this superior animal on page 293 of our 2d Volume.

Durham Stock for England.—Mr. Collins likewise shipped on the 17th of April, on board the packet-ship New York, for Liverpool, the Durham bull New Englander, got by Hero, above. This splendid animal is destined for Earl Spencer, and however superior this nobleman's stock may be considered, we think it will not be deteriorated by taking this American cross. We believe that New Englander is the first Durham bred in the United States, that has ever crossed the Atlantic for Great Britain. It looks something like taking coals to Newcastle, and we shall be anxious to learn John Bull's opinion of the exportation.

State Agricultural School.—A bill to incorporate this school has passed the legislature. It is a private corporation, and no appropriation of the public money is made for it.

Seeds for Distribution.—We again acknowledge ourselves under obligations to the Hon. H. L. Ellsworth of the Patent office, for various packages of improved seeds. We have distributed them among our friends for experiment.

Credit Quotations.—"Cure of Hoven in Sheep." The Boston Cultivator of 30th March copies this from us without giving credit.

"Okra Gumbo." Did the Albany Cultivator copy this article from the American Agriculturist Almanac, or did it receive it as an original communication from Mr. Affleck? If it did not, it should give the almanac credit.

ERRATA.—In Judge Andrews' article on Georgia Lands, page 118, column first, line first, for "only a few of the *grapes* grow well in Georgia," read "*grasses*."

AGENTS.—J. J. McCaughan of Mississippi City, is appointed an agent of the American Agriculturist, and he is authorized to receive subscriptions therefor.

ACKNOWLEDGEMENTS.—To Professor Richardson, of Bethany College, for his address delivered before the Agricultural Society of Brooke and Ohio counties, Va., at its annual exhibition, October 11, 1843. The agriculture in these counties is shown to be in a very favorable state compared even with the best parts of Old Virginia.

To John L. Hunter, Esq., for his address pronounced before the Barbour County Agricultural Society, at Ewfaula, Ala., at its late anniversary in February. We here find some excellent observations on the culture of cotton, application of marl, muck, and cotton-seed as manures, and benefits of fall plowing.

To Messrs. Miller & Brown, for a Memoir on the Origin, Cultivation, and Uses of Cotton, by the Hon. Whitmarsh Seabrook, President of the State Agricultural Society of South Carolina. A most valuable pamphlet of 62 pages octavo, embodying in its history all that is essential to a knowledge of the cotton-plant.

To John D. Steele, Esq., for his address at Westchester, Pa., Oct. 1843, before the Chester and Delaware Agricultural Society, in which the value of chemistry applied to agriculture is fully shown.

To Thomas Affleck, Esq., for his Lecture on the Elements of Horticulture, at Washington, Miss., Nov., 1843, before the Agricultural, Horticultural, and Botanical Society, of Jefferson College. Mr. Affleck is quite at home in the theory and practice of the subject of his lecture, and speaks clearly, simply, and to the point.

TO CORRESPONDENTS.—S. C. Higginson, Americus No. 6, W H. Sotham, T. Affleck, Northern Farmer, Thomas Spaulding, M. Van Buren, and Examiner, No. 5, have been received the past month. We hope to find room in our next number for most of the deferred correspondence at present on hand.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, APRIL 25, 1844.

ASHES, Pots,	per 100 lbs.	$4 44	to	$4 50
Pearls,	do.	4 94	“	5 00
BACON SIDES, Smoked,	per lb.	3½	“	4½
In pickle	do.	3	“	4
BALE ROPE	do.	6	“	9
BARK, Quercitron	per ton	23 00	“	24 00
BARLEY	per bush.	52	“	56
BEANS, White	do.	1 25	“	1 75
BEEF, Mess	per bbl.	5 88	“	7 00
Prime	do.	3 88	“	5 00
Smoked	per lb.	5½	“	7
Rounds, in pickle	do.	3	“	5
BEESWAX, Am. Yellow	do.	28	“	31
BOLT ROPE	do.	12	“	13
BRISTLES, American	do.	25	“	65
BUTTER, Table	do.	15	“	20
Shipping	do.	8	“	12
CANDLES, Mould, Tallow	do.	9	“	12
Sperm	do.	29	“	38
Stearic	do.	20	“	25
CHEESE	do.	4	“	7
CIDER BRANDY, Eastern	per gal.	35	“	40
Western	do.	20	“	37
CLOVER SEED	per lb.	7½	“	8½
COAL, Anthracite	2000 lbs.	4 50	“	5 50
Sidney and Pictou	per chal.	5 75	“	6 25
CORDAGE, American	per lb.	11	“	12
CORN, Northern	per bush.	52	“	54
Southern	do.	52	“	53
COTTON	per lb.	6½	“	10½
COTTON BAGGING, Amer. hemp	per yard.	16	“	18
American Flax	do.	15	“	16
FEATHERS	per lb.	30	“	36
FLAX, American	do.	8	“	8½
FLAX SEED, rough	per 7 bush.	9 00	“	9 75
clean	do.	10 00	“	10 50
FLOUR, Northern and Western	per bbl.	4 75	“	5 00
Fancy	do.	5 25	“	5 50
Southern	per bbl.	4 75	“	5 00
Richmond City Mills	do.	6 25	“	6 50
Rye	do.	3 25	“	3 50
HAMS, Smoked	per lb.	5	“	10
Pickled	do.	4	“	7
HAY	per 100 lbs.	33	“	38
HIDES, Dry Southern	per lb.	9	“	11
HEMP, Russia, clean	per ton.	180 00	“	185 00
American, water-rotted	do.	140 00	“	180 00
do dew-rotted	do.	90 00	“	140 00
HOPS	per lb.	7	“	9
HORNS	per 100	1 25	“	5 00
LARD	per lb.	5½	“	7½
LEAD	do.	3½	“	4
Sheet and bar	do.	4	“	4½
MEAL, Corn	per bbl.	2 50	“	2 75
Corn	per hhd.	12 00	“	12 50
MOLASSES, New Orleans	per gal.	28	“	30
MUSTARD, American	per lb.	16	“	31
OATS, Northern	per bush.	32	“	34
Southern	do.	28	“	30
OIL, Linseed, American	per gal.	76	“	78
Castor	do.	95	“	98
Lard	do.	60	“	62
OIL CAKE	per 100 lbs.	1 00	“	— —
PEAS, Field.	per bush.	1 25	“	— —
PITCH	per bbl.	1 12½	“	1 37
PLASTER OF PARIS	per ton.	2 50	“	2 62
Ground, in bbls. of 350 lbs	per cwt.	1 12	“	— —
PORK, Mess	per bbl.	8 75	“	10 00
Prime	do.	7 00	“	8 00
RICE	per 100 lbs.	2 87	“	3 25
ROSIN	per bbl.	60	“	80
RYE	per bush.	70	“	71
SALT	per sack	1 00	“	1 50
SHOULDERS, Smoked	per lb.	4	“	6
Pickled	do.	3	“	4
SPIRITS TURPENTINE, Southern	per gal.	34	“	35
SUGAR, New Orleans	per lb.	5	“	8
SUMAC, American	per ton	25 00	“	27 50
TALLOW	per lb.	6	“	7½
TAR	per bbl.	1 50	“	1 02½
TIMOTHY SEED	per 7 bush.	12 00	“	14 00
TOBACCO	per lb.	3	“	6½
TURPENTINE	per bbl.	2 37	“	2 75
WHEAT, Western	per bush.	1 07	“	1 12
Southern	do.	1 00	“	1 05
WHISKEY, American	per gal.	22	“	24
WOOL, Saxony	per lb.	35	“	50
Merino	do.	35	“	40
Half-blood	do.	25	“	30
Common	3do.	20	“	25

New York Cattle Market—April 22.

At market, 1,000 Beef Cattle, (400 southern,) 160 Cows and Calves, and 300 Sheep.

PRICES.—*Beef Cattle.*—In consequence of large offerings of rather poor quality, prices have farther receded, and we quote $4.50 to $5, a $5.25, to $6, with a few only at $6.25. 200 left over.

Cows and Calves.—Sales at $12 a $28. 10 left over.

Sheep were very dull of sale at $2.50 a $5. 100 left over.

Hay 56 a 62½ cts. per cwt. for loose.

REMARKS.—*Ashes.* The quantity of these in market is small, and prices firm. *Cotton.* The late news from England, giving advices of a considerable decline there, and that the stock on hand at Liverpool on the 1st of April was 629,000 bales, against 658,000 same time last season, has had quite an effect upon this market, and sales have taken place at ½ to ½ cent lower than previous to the arrival of the Acadia. Whether this reduction will continue to be submitted to by holders, remains to be seen. Export from the United States since 1st September last, 835,409 bales; same time last year, 1,476,470; same time year before, 995,587. *Flour.* Large supplies being soon expected in market, it is now dull. *Rye Flour* is scarce. *Corn-Meal* steady. *Grain* of all kinds in good demand. *Wheat* scarce. *Hay* is very dull and large supplies pressing upon the market. *Hemp* rather more inquiry. *Molasses* firm. *Naval Stores* the same. *Pork* has improved. *Beef* dull. *Lard*, *Butter* and *Cheese*, in good request. *Rice* inactive. *Seeds.* The season for these is nearly over, and little inquiry. *Sugar*, dull. *Tobacco* quite active.

Money is more in demand; short paper is done at 5 per cent., and long at 6; loans on real estate at 6 to 7 per cent.

Stocks are steady, without much change.

Business generally is remarkably good, and so much has not been done in this city since the spring of '36.

The weather the past month has been very favorable, and the crops of all kinds forward and looking well.

HOVEY'S SEEDLING STRAWBERRY.

The subscriber offers the above Seedling Strawberry for sale at $1,00 for sixty plants, or $1,50 per hundred. The growing plants can be seen at his office, 205 Broadway. A. B. ALLEN.

WARREN'S IMPROVED HORSE POWERS AND THRESHING MACHINES.

The subscribers continue to manufacture and vend these celebrated machines, with increased success and satisfaction. They will also manufacture a superior Four Horse Power and Thresher on the same principle this season, to sell together for only $100. The price of the Two Horse Power and Thresher together, is only $75. The Two Horse Power alone, $50. The Four Horse Power will be proportionable. Machines deliverable in this city for cash.

Besides our Beater Threshing Machine, we are making a superior Spike Thresher, adapted to be used with any power. This we shall sell at the same price. It has been tested and proved to be excellent and safe.

L. BOSTWICK & CO.,
2t. 272½ Pearl st., New York.

FARMS AND REAL ESTATE FOR SALE.

Several very fine farms in different parts of the United States can be had upon the most reasonable terms. Also, beautiful country seats in this vicinity, at very cheap rates, and real estate in the city. A. B. ALLEN, 205 Broadway.

PRINCE'S LINNÆAN GARDEN AND NURSERIES.

The new Descriptive Catalogues of this establishment, comprising above 1000 varieties found in no other collection in America, and at very reduced prices, will be sent gratis to every *post paid* applicant, or may be obtained at 23 Pine street, New York. All orders are executed with despatch and in a superior style, and we guaranty the satisfaction of purchasers.

WM. R. PRINCE & CO.
Flushing, March 18th, 1844. *2t

ANALYSIS OF SOILS.

The subscriber having been called upon by the Farmers' Club of the city of New York to undertake the analysis of soils for agricultural purposes, has engaged to do so on the following terms:—

For the solution of simple questions, as to the presence or absence of lime, common salt, or gypsum in the soil, $2.

For the determination of the presence of bone, earth, potash, and the more difficult questions, $5.

Specimens of surface-soil, weighing 4 lbs., should be sent to the office of the American Agriculturist for the subscriber, a letter being forwarded at the same time to Dr. Gardner, 683 Broadway, with a remittance. Charges upon both must be paid.

D. P. GARDNER, M. D.
New York, April, 1844.

PREMIUM EAGLE PLOWS.

MANUFACTURED BY

RUGGLES, NOURSE, & MASON,

And for sale at the Manufactory in Worcester, and at their AGRICULTURAL WAREHOUSE and SEED STORE, Quincy Hall, Boston.

A full investigation and trial of plows was had in October, 1843, (occupying several days,) by an able committee of the Essex Agricultural Society, when 17 plows were presented. The committee in their report say, "in testing the quality of a plow, the *power* by which it is moved, the *ease* with which it is handled, and the *manner* in which it completes the work, are *prominent* points for consideration;" and in speaking of the Eagle Plow, to which they unanimously awarded the highest premium, they say, "As near as we can ascertain, this plow combines all the good qualities manifested in either of the others, with some peculiar to itself;" and "further, our attention was particularly called to the *quality* of the castings on the plows of Ruggles & Co., their *finish* and *durability*." "Their appearance certainly is more perfect than anything we have elsewhere seen." "The process of *chilling* the *points*, the entire *edge* of the *share*, and *flange* or *base* of the *landside*, give a permanence and durability to the work that render it of a decidedly superior character." "And we think there is no hazard in saying the value of the parts thus made, is more than doubled by the process."

At the Plowing-Matches held in Massachusetts the same year, forty-three premiums were awarded to plowmen using plows made by R., N., & M., twelve of which were the highest premiums awarded in the counties of Essex, Middlesex, Worcester, Plymouth, and Bristol.

SUBSOIL PLOWS.

Among their great variety of kinds and sizes of plows, they have several sizes of SUBSOIL PLOWS, made in form like a genuine sub-soil plow *imported* by *them* from Scotland. They have been thoroughly tested, with great satisfaction, as the increasing demand from all sections of the country testifies. The New York State Agricultural Society in September, 1843, awarded their first prêmium to the subsoil plow made by R., N., & M., (*entered by Benj. F. Smith of Syracuse.*) Prices, $6, $8, $10, $12, and $15.

Also, a variety of plows particularly adapted to the culture of Cotton, Rice, Tobacco, &c., in the southern states, equal in style and quality to those used in this section of the country.

At their Warehouse may be found the most extensive and complete assortment of AGRICULTURAL and HORTICULTURAL IMPLEMENTS to be found in the United States, embracing every tool used in the cultivation of the farm and garden. Also, a large and well-selected assortment of Field, Grass, Garden, and FLOWER SEEDS, all of which are offered at wholesale or retail, at prices which can not fail to suit the purchaser.

The Editor of this paper will take orders for the above plows.

SULPHATE OF SODA.

A maker of Sulphate of Soda has requested me to offer the article, fine-ground, at about one cent per pound. Any farmer, desirous of trying the article, can obtain a supply by calling at 34 Cliff street, N. Y. Extracts from Professor Johnston's work on Chemical Manures, as to the value of this sulphate, will appear in May number of the American Agriculturist.

2t WM. PARTRIDGE.

WOBURN HOGS.

For sale, a few of the celebrated Woburn or Bedford breed of Hogs, comfortably caged and delivered in New York at the following prices, viz: One Boar eleven months old, $25; three Boars, five months old, $17 each; four Sows five months old, $15 each; a few pair of spring Pigs, $25, delivered 1st of June next. Address the subscriber at New Haven, Ct. WM. K. TOWNSEND.

March 19th, 1844. 2t

LIME FOR SALE CHEAP.

The subscriber will take orders for delivering lime in any quantity, on board vessel, just above Stoney Point, on the Hudson River, at 3 cents per bushel. Samples, and an analysis of it by an eminent geologist, can be seen by calling at his office. One great object in putting the price so low, is to introduce the use of it as a manure more extensively among our farmers.

OYSTER-SHELL LIME.

Will be furnished in this city at the kilns, at 4 cents a bushel.

PLASTER OF PARIS

Ground, and put up in barrels of 350 lbs. each, at $1,12½ per barrel. This is an excellent fertilizer, easily transported, and well worthy the attention of Southern Planters. All orders should be post paid and accompanied with the money.

A. B. ALLEN, 205 Broadway, N. Y.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars: eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 miles, without the State.

ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume I. and II. of THE AMERICAN AGRICULTURIST, with tables of contents complete, for sale at $1,00 each; elegantly bound in cloth, $1,25. These are handsome, tasteful books, and make very desirable premiums for distribution with Agricultural Societies, and should also find place in all our District School Libraries. They constitute the best and most complete treatise on American farming, stock-breeding, and horticulture, extant. When several copies are ordered, a liberal discount will be made.

☞ To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster.

Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway. New York.

GREAT SALE OF ELECTORAL SAXON SHEEP.

The undersigned will sell at vendue, the two flocks of *pure Electoral Saxon Sheep*, belonging to the estate of the late Henry D. Grove, as follows: 1st. That at Granger, Medina county, Ohio, consisting of about 400 sheep, on the 30th Sept., next, on the farm now occupied by them. 2d. The home flock, at his late residence in Hoosick, Rensselaer county, N. Y., consisting of about 350 sheep, on the 15th Oct., next. A rare opportunity is offered to those who may be anxious to improve the quality of their flocks. The following is the opinion of the distinguished manufacturer who has usually purchased Mr. Grove's wool, of the character of these flocks:—

"The purest blood in this country was introduced by the late Mr. Grove in his own flocks, the wool of which I have been familiar with since their importation in 1827. In point of fineness and admirable *felting* qualties, this wool is unsurpassed by any flock in this country, and the fleeces average about half a pound each more than any other I am acquainted with."

SAMUEL LAWRENCE.

Lowell, April 9, 1844.

The terms of the sales will be cash. Reference, Samuel Lawrence, Lowell, Mass., or the subscribers.

ELIZA W. GROVE,
W. JOSLIN,
S. A. COOK.
} Administrators.

Buskirk's Bridge, N. Y., April 20, 1844.

CONTENTS OF MAY NUMBER.

Steeping Seeds before Sowing,
Culture of Flax, } - - - - - Page 129
Farm of Mr. Gibbons, - - - - - - - - - 130
Culture of the Field-Bean, - - - - - - - - - 131
Death of Willis Gaylord, Esq.,
A Fountain,
Manure of Fowls, } - - - - - - 133
Agricultural Errors, Wm. Partridge, - - - - - 134
Hovey's Strawberry, Philetus Phillips,
Enormous Egg, S. } - - - - - 135
Sheep Husbandry No. 5, Americus, - - - - - - - 136
On Driving Sheep, S. W. Jewett, - - - - - - - 138
Potatoes and Saline Manures, R. L. Allen, - - - - - 139
Chess from Wheat, R. L. Allen, - - - - - - - - 140
Paular Merinos No. 4, Examiner, - - - - - - - 141
Remarks on Pruning, D. Jay Browne, - - - - 143
Grafting-Knife, Westchester County, - - - - - - 144
Taming a Savage Bull, Erasmus Galton,
Profits of Poultry, H. C. M.,
New York State Agricultural Society, } - - - - 145
List of Premiums for 1844, - - - - - - - - 146
Circular of State Agricultural Society, - - - - - - 150
Southern Calendar for May, - - - - - - - - 152
Northern do. do. - - - - - - - - 153
An American Herd-Book, L. F. Allen, - - - - - - - 154
Foreign Agricultural News, - - - - - - - - 155
Editor's Table, The Cotton-Plant, Value of Sulphate of Soda, &c., &c., - - - - - - - - - - 156
Acknowledgments,
To Correspondents, } - - - - - - - - - 158
Review of the Market, - - - - - - - - 159

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most
noble employment of Man.—*Washington.*

VOL. III. NEW YORK, JUNE, 1844. NO. VI.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

CULTURE OF CORN.

Corn is unquestionably the most valuable grain-crop which is raised in the United States. So much, however, has lately been written upon its culture that little new can be said upon this subject. It is well known that it is a gross feeder, and land can scarcely be made too rich for it. Proper hoeing, frequent stirring of the earth with the plow or cultivator between the rows, and above all, keeping the weeds down, are quite as essential as a rich soil. There is one point in the culture of corn, and a pretty important one to, which seems to remain in dispute, and that is regarding the breaking of the roots by deep plowing between the rows. The late Judge Buel contended that this was very injurious; while an equally eminent authority, Judge Beatty of Kentucky, has come to the conclusion, after careful experiment, that cutting the smaller roots by the plow, or otherwise, to a moderate extent, is not injurious to the crop; for, says he, the main roots will thereby throw out innumerable others in their place, and to a much more diversified extent. We will here make a suggestion of our own. Does not the cutting off a few of the smaller corn-roots act upon the stalks in the same manner as root-pruning of fruit-trees? When the growth of the tree is too rank, we know that root-pruning has the effect of checking the production of wood in the tree, and of causing it to produce more fruit. Why, then, will not the root-pruning of corn add to its increase of grain? We should be very glad if some of our readers would make a series of experiments on this crop the coming season, with a view of testing the merits of the two different methods of culture. We apprehend that when the soil is very rich, and there is a tendency of the corn running too much to stalk, cutting the roots would be advantageous; but where the land was rather poor, and no such result likely to ensue, that cutting or breaking the roots in its culture would be injurious. However, this is a mere matter of speculation with us, and till some reliable experiments are made in different kinds of soil, the same season, and with rows side by side, a mere opinion on this subject should have little weight with the practical farmer.

Corn for Fodder.—The culture of corn for summer soiling and winter fodder is greatly on the increase, and demands attention. From experiments made by several of our friends last season, in growing corn for soiling, they found that such as was sown in drills about one foot apart, did much better than that sown broad-cast; and that the varieties of Sweet-Corn which produce tall slender stalks, and the most leaves, gave the best and greatest amount of fodder. They infer that there was more saccharine matter in the stalks from these varieties, and the cattle, consequently, found it more palatable and nutritious.

Corn for Sugar.—It seems to be a settled point, that corn can be grown to advantage for the purpose of making sugar and molasses, in the interior of the country where the former costs 10 to 12 cents per pound, and the latter 50 to 55 cents per gallon. We presume that the same kinds of corn which make the most and best fodder, would make the most and best sugar and molasses; with this difference, that as the corn-blades must be stripped from the stalks previous to cutting them for making sugar, the kinds bearing the least leaf and best stalk, should be selected for this crop.

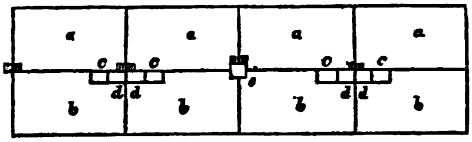
We gave full details in our first volume, of the best method of cultivating corn for making sugar and molasses, and the whole process of cutting and crushing the stalk, and boiling and granulating the juice. Little important has since been discovered in the way of improvement. Some, however, prefer cultivating it in drills as recommended above for fodder, as they say it is not so likely to throw out ears; but then the stalks are smaller and the blades more abundant, so that the extra labor in stripping them would probably be equivalent to that of repeatedly taking off the ears. If cultivated closely in drills, we doubt whether the saccharine matter would be as abundant in the stalks as when grown wider apart; that is, we think the juice would contain a greater quantity of water, gallon for gallon. Corn may be planted for making sugar, or for fodder, any time till the 20th of this month north of 40 degrees; farther south, still later.

SKETCHES OF THE WEST.—NO. IV.

We spent some little time at Lexington, and during our stay there, made various excursions in the neighborhood, and the more we saw of this delightful country, the more we were convinced of its great superiority as a farming and grazing district.

Stocks of Messrs. Curd and Allen.—About three miles from Lexington, on the road to Shakertown, on handsome plantations lying near each other, resided Mr. Wm. P. Curd, and Mr. Edward Allen; both famous for breeding fine stocks of Irish Graziers, and Berkshire swine. The former is quite a genius in his way, and great is his fame in fine pigs throughout the west; he having been one of the first to embark in this business, and very enterprising and persevering in continuing it. He had a splendid stock, several of which were imported directly from England. The same may be said of Mr. Allen, who is one of the very best judges, and has as fine a taste in breeding as any man we ever met. And lest we should be accused of partiality in our judgment, we will add of Mr. Allen, that although being of the same name, we can trace no relationship of blood between us.

We liked the arrangements of these gentlemen for breeding very much, and think it suits better the mild climate of Kentucky, than the close piggeries we are obliged to build for our protection farther north. Below we subjoin a cut explanatory of the same.



Kentucky Piggery —Fig. 37.

The spaces *a*, *a*, and *b*, *b*, may contain areas of grass-land of any dimensions convenient to the breeder, enclosed and subdivided by fences, which are shown by the lines above, running at right angles. *c*, *c*, and *d*, *d*, are pens of any suitable size, made of boards, with shed-roofs and plank-floors. These are then divided by partitions into four each, with doors at *d*, *d*, and *c*, *c*, opening into the lots *a*, *a*, and *b*, *b*; so that each pen makes a comfortable apartment for a breeding-sow, where it can be kept by itself, and have all the shelter requisite, together with plenty of space for grazing and exercise. *e*, is the feeding-house, which contains all the food necessary for the stock, and where kettles are set to cook it. As no stream runs through these lots, a well is dug here, and a pump placed in it, which furnishes the supply of water. These lots open into each other by small gates, and the fences are got over by steps placed on each side.

After viewing these and some other things, Mr. Edward Allen took us through handsome ranges of plantations, to the residence of his father, some 4 miles distant. Here I saw his magnificent Durham cow Princess, purchased of Mr. Henry Clay, Jr., who imported her from England. She is one of the most imposing animals we ever looked at; large and fine, with a spread of loin of at least 30 inches, which is one of her best points. In addition to this, she is well let down in the twist, very good in the brisket, a fair milker, and keeps fat on a small quantity of food. Indeed, Mr. Allen told us the greatest difficulty in the matter, was, to get her poor enough for good breeding condition. Another imported cow we found of smaller size, but very fine in all her parts. She handles well, and is a superior milker. The stocks of the planters whom we visited in this excursion were not large, they devoting their land more particularly to the cultivation of hemp, of which they obtain superior crops. But on this topic having already pretty freely spoken in former volumes, it is unnecessary for us to dwell at greater length.

CULTURE OF THE POTATO.

We have read hundreds of essays on the culture of the potato, and yet, among them all, we do not find any general fixed rules in regard to the best method of producing a crop. When carrying on our own farm, we made various experiments during a series of years in this matter, and the following is the result:—

1. If the season proved a dry one, the plantings from whole tubers of the largest sizes, produced

the greatest yield. The reason of this, we inferred, was, that large tubers gave the growing crop a greater amount of nourishment, than smaller ones or cuttings could.

2. If the season proved wet, then little or no difference was found between cuttings, or small or large tubers.

3. We never obtained a greater quantity, nor so *good a quality* of potatoes, as when planted on sod turned up after the grass got well started, the first week in June; and we do believe, where a pleasant flavored, mealy root is desired, that a grass ley fresh turned over, is the very best prep-

of lime is not convenient, ashes are excellent at the rate of a pint or so round each stalk, or plaster at the rate of a table-spoonful. Either of these greatly stimulate the growth. But we need not further dwell on this point, as the subject of manures for the potato, is extremely well treated in an article by one of our correspondents, page 139, in our last number. We wish the growers of the potato could be induced to pay more attention to the *quality* of this important crop than has usually been done.

SOCIAL MEETING OF FARMERS AND GARDENERS.

A MEETING will be held at our rooms, 189 Water street, N. Y., on the first Monday of each month, from 12 till 2 o'clock, P. M., for the benefit of *Farmers, Gardeners,* and *Others,* disposed to come, for the purpose of having a social, informal chat, on subjects appertaining to Agriculture and Horticulture.

These meetings are entirely free from charge of any kind whatever, to those who may please to attend them. They are subject to no formal speaking, but every person present is left to pass his time in the manner most agreeable to him, either in listening to what may be going on, or in conversing with any one present to whom it may be agreeable.

A regular report of the proceedings will be published, once a month, in the American Agriculturist, and other journals.

You are cordially invited to attend, without ceremony, and exhibit whatever you may have particularly curious, rare, or useful, in the way of plants, flowers, fruits, seeds, vegetables, farm, or garden implements, fertilizers, &c., &c. If not convenient to attend the meetings, as specified above, we should be pleased to receive whatever you may wish to have exhibited at any other time, with an account of the same in writing, or otherwise, in order to embody it in the report.

A. B. ALLEN.

wide-spread, mellow bed; and that, unless this is provided, they can not generally expect, except in the richest and most friable soils, to obtain a large crop. Our emphatic advice, therefore, in the after-culture of the potato, is, to turn with a wide plow all the good top-soil between the rows to the plants; first, soon after their appearance above the ground, and second, just before the vine blossoms; but in doing this, be careful not to bury the tubers too deep. This should then be followed with the hoe, gathering the fine soil nicely about the vines, and leaving their beds with a flat top rather than a steep roof shape; in this way they preserve the moisture better, and present a broader surface to the growing and invigorating influences of the light and sun. We usually plant in drills 3 feet apart, the sets 6 inches apart in the drills. When a top-dressing

for enriching the soil. Loose, tumble-down wall fences, which with their accompanying nuisances of elder, thistles, and other vile weeds, occupied lines of 6 feet in width or more of some of the best portions of the farm, were removed, together with the surface-rocks and stones, as fast as the fields were broken up by the plow, and used in filling up a dock for the convenience of landing from the river-craft, and to build a strong sea-wall in front of the estate, and construct roads and ditches wherever necessary.

The course of cropping adopted, was such as is more or less common on good soils on Long Island;

---

* We have thought proper to make use of the original Dutch name of this place, viz: "Helle-gat," meaning, *a narrow passage*. Hurl-Gate and Hell-Gate are American corruptions, which one could wish to see abandoned for the appropriate original.

the sod being broken up the first year, and corn or roots planted with a heavy dressing of manure. On such fields as the crop could be got off sufficiently early in the fall, wheat was sown with grass-seed; on those which were later, oats or barley and grass-seed followed in the spring. The third year the land yields grass, and in this it is kept as long as profitable, when it will again be broken up and subjected to two years' cropping with manure.

The whole area of the estate comprises 149 acres. From this must be deducted for buildings, pleasure-grounds, garden, woodland, and salt-meadow, 61 acres; leaving for arable land, and what may justly be called the farm, 88 acres. Of this, 6 acres are taken up in an orchard of full-grown trees, in which, owing to their thick shade, neither the grass nor any other crop will be more than one half what it would if no trees were upon it. Yet from these 88 acres, Mr. Woolsey raises hay, roots, and grain enough (with the exception of wheat-flour, for family use) for the consumption of his people—the keeping of 10 horses, 3 yoke of working-oxen, 1 bull, 12 milch cows, and 4 head of heifers. With this stock, the straw and offal of the farm, and the sea-weed thrown up by the high tides, he will hereafter probably make 300 cords of manure every year, which will enable him to still further enrich his farm; so that its condition for good cropping is now only fairly attained, and we should not be surprised to find three years hence, that the products were nearly doubled; more especially when we consider the very important improvement added the present season, of subsoil plowing. Every foot of land broken up this spring has been done with Ruggles, Nourse, & Mason's superior eagle and subsoil-plows, and the tilth is now so light and deep, that as we were walking over it, Mr. Woolsey could anywhere thrust his cane easily into it two feet. We consider the introduction of the subsoil plow as the greatest modern improvement in tillage, and before our present volume closes, we shall hope to record for the benefit of our readers, the result of it at Casina, in its crops of oats, corn, and roots—the wheat-crop having been put in last fall previous to its being brought on to the farm.

Of the stock, Jupiter is a very pretty Short-Horn bull, and is from the herd of Dr. Pool of New Jersey. He is of a pure white color, medium size, fine points, and handles well. He is docile and playful in disposition, as active as a colt, and a good feeder. Eliza, his dam, is also from the herd of Dr. Pool. Several of the cows have more or less Durham or Devon blood in them, and have [illegible] ...ed for their deep milking qualities, they been selec[illegible] ...on from 16 to 28 quarts per giving when in seas[illegible] ...iter, Mr. W. an- day. From these, crossed by Ju[illegible] ...his suc- ticipates raising choice dairy cows, and o[illegible] cess in this we have not a doubt. It is a reasonably cheap and sure method of improving the general stock of the country. The pigs are of the Berkshire breed, pure Chinese, imported directly from Canton, grass-breed, and the crosses of the three. They are fine animals, good feeders, and thrifty.

The orchard is mostly winter-fruit, and a source of considerable income. The grass there is of the cocks-foot or orchard variety (*dactylis glomerata*) and clover. It was forward enough the last week in April for soiling, and has been daily cut for the horses and working-cattle, and for feeding the milch-cows at night in their stalls. We are of opinion, if the season prove favorable, that three cuttings averaging half a ton or more of dried grass to the acre may be had there, which will be a great yield when we consider how thickly the ground is studded with fruit-trees. These removed, it would unquestionably produce 3 to 4 tons of dried grass per acre.

The gardens at Casina are large and well stocked. Around the strawberry-vines we noticed dried grass was spread, so as to prevent the fruit touching the ground; thus not only keeping it clean, but hastening its ripening, and adding to its flavor.

The grounds about the mansion are tastefully planted, and enclosed with a light open iron-fence, the first we have seen out of England. We think such fences the most appropriate for pleasure-grounds, as they do not obstruct the view, and are quite ornamental. The lawn is beautifully graded, and being carefully and frequently mowed and rolled, the turf has acquired a thick velvety coating, which assists in guarding it from the scorching effects of a drought, and presents a very agreeable sight to the eye. The view here of the river—its numerous bays, and coves, and fairy isles, and the adjacent country, is varied and picturesque in the extreme, and well worthy the study of the man of taste, and the artist. We wonder our citizens do not oftener resort to the country and its healthful occupations.

DORKING FOWLS.

We have been so often written to on the subject of Dorking Fowls, that we take this conspicuous method of replying, that Mr. H. T. Chapman, No. 77 Fulton street, and Dr. Henry A. Field, No. 51 Third Avenue, this city, will have a few pairs for sale the coming autumn, at $3 to $4 per pair. Those gentlemen for whom we brought the breed from England, in 1841, do not keep them for sale, but merely for their own private use. The Dorkings are an excellent fowl, of the larger, though not of *the* very largest kind. They are fine in their points, docile, well fleshed, and hardy; good layers, and nurses, and are more used for capons than any other variety in England. Their weight, well fatted, is from 5 lbs. to 10 lbs., according to sex and age. We have heard of their weighing, occasionally, 12 lbs., but this is rare. In conclusion, we beg the public not to entertain any extravagant notions regarding them, and then they will not be disappointed when they become their possessors. The Dorkings, generally, have the ...ition of a fifth toe, though all do not; every addi[illegible] ...er is *not* a Dorking, and five-toed fowl, howe[illegible] ...uide will those taking that point alone for their g[illegible] get mistaken; for five-toed fowls of no particular breed are quite common the country over. For further particulars regarding the Dorkings, we must again refer to pages 180 and 342 of Vol. I., and 112 of Vol. II., of this periodical: which we think, will give our correspondents all the information that they can desire on this subject.

We commence in the present number of our periodical, a series of articles on the introduction of the sugar-cane into Georgia, and the best method of culture and making sugar in the United States. They are written by one of the most eminent planters of the south, and one whose elegant pen has often been devoted, in various publications, to the cause of agriculture. These will be followed by others on the culture of rice which will be found of great value. Through the ability and kindness of southern friends, our paper, from its commencement, has been one of the best exponents of the agriculture of the south, and it is ever our intention to keep it so; and we trust thereby to make it among the most useful and popular publications of the day, to the residents of that highly-favored section of our country.

CULTURE OF THE SUGAR-CANE.—NO. I.

Introduction of the Sugar-Cane into Georgia.—In the winter of 1805, my friend, Mr. Cooper of St. Simons, who had received a few plants the previous year, sent me one hundred of the Otaheite cane, introduced, among others, from Otaheite, by Lieut. Blight. Before that time, from 1794 to 1801, the revolution in St. Domingo (which was but an extension of the same flame which had carried murder and desolation as well into every cottage, as into every palace in France) had driven some few Frenchmen to fly for refuge from their burning houses, and their frantic pursuers, on board American vessels, with such of their faithful slaves as would follow them. When there, they naturally turned their hopes to Louisiana, where they would find Frenchmen, and where they might find a home for themselves and their servants. To these unhappy men, did Louisiana owe the introduction of the Creole-cane, a small yellow kind, and the only cane then grown in the French islands, and the manufactory of sugar.

A young friend of mine, who had been educated in France, had gone to New Orleans soon after the sugar-cane had been introduced, and sugar manufactured. Among other communications, he mentioned while there, that the orange-trees had been entirely destroyed by frosts. As the orange-trees on the coast of Georgia, had been growing from the first settlement of the country by General Oglethorpe, without injury, I naturally concluded that we, too, might grow the cane, and might manufacture sugar, and from that period I was anxious to make the attempt; but it was not until the winter of 1805, that my friend, Mr. Cooper, had furnished me with the means of doing so. My hundred cane, produced three thousand, and from these most of the cane of Georgia, and even Florida has come.

In 1808, I had extended my planting of cane to eight or ten acres; and about the same period, the evil spirit which had been long abroad in England, and that was destined to curse her colonies first, and then the father-land, had begun to make thinking men in Jamaica and other colonies, doubt of the course of English legislation, and to look abroad for a future home. Among them several came to Georgia, and were surprised at the size to which my cane grew, and its apparent sweetness; for be it remembered, at that time, in none of the British colonies, had the hydrometer been applied to the measure of the sweets of the cane. The opinion of these gentlemen, with the conclusions I had drawn from the report of my friend from Louisiana, determined me, in despite of the embargo laws, to proceed in the cultivation of sugar as a crop. My success for the first few years, determined my neighbors to follow my example, and everywhere sugar plantations sprang up around me. The price of sugar was then about 10 cents per lb., a remunerating price. A few cane were carried up the Altamaha, and its tributary streams, the Oconee and Ocomulgee, by every boat; and very soon, in travelling from Darien to Milledgeville, or Macon, by other routes, the cane was seen growing, in luxuriance, around every log-house on the way. The soil was light and warm, and had been fertilized, by the breeding of cattle, which had heretofore been gathered together at night, to give milk to the family, and butter, and abundance of every kind; and now a luxury was added, the only luxury that is in some degree necessary to man. I have nowhere seen, I have nowhere read, of any region where sugar-cane grows with so little labor to its grower, and sugar is manufactured with so little trouble to its manufacturer, as in the pine-lands of Georgia and Florida, for 150 miles from the sea.

The price to which sugar has fallen, has involved in debt and ruin, the growers of sugar for sale for the consumption of others, in most countries; but their very enthralment, the great expense in which they have involved themselves in preparing the means necessary for commencing the culture and manufacture of sugar upon a large scale, has bound them as with an iron chain, to a profitless pursuit. For myself, after 30 years and more of experience, and after having read all that has been published in the English language upon sugar, I became satisfied that sugar can not be produced for sale in any country or in any climate, under 5 or 6 cents per lb. England, in the fell purpose of destroying the colonies of other nations, and putting down the growing of sugar, of cotton, and of indigo, in countries that border the Atlantic, consented to destroy her own colonies. She would still have Hindoostan, and her hundred and twenty millions of abject subjects, who would and must labor at her will for 2 anas (6 cents) per day; this would buy from 2 to 4 seir (4 to 6 lbs.) of rough rice, a little salt, and a cotton cloth to cover their waist. In Hindoostan, and her hundred isles in India, there are no radicals to burn barns, and to light up wheat-stacks; there are no Daniel O'Connells to dingle in their ears Irish rights, or Irish wrongs. But there is in the United States, the same blood, flowing through the same veins, and the same elastic spirit, which has descended to them from their common Anglo ancesters, which directs them to the best results, through the simplest means. If, then, England should succeed in burning every sugar-house, and in murdering every white man, from the Brazils to the Gulf of Mexico, she will still find that the Anglo American is in no want of Hindoostan sugar, but will produce enough in the south from sugar-cane, in the middle states from corn, and in the northern and western states from the maple-tree, to supply all their wants.

What then, will you inquire, is the present condition of the sugar culture? I reply that all have given it up, upon a large scale, as a crop, and have returned to rice or cotton. If the Louisianians of the lower Mississippi, have not yet done so, it is because their establishments were upon a large and costly scale; their lands had cost them at least $100 an acre; their sugar-houses, their mills, their engines to propel them, their duplicate boiling apparatus, had cost upon a common average at least $30,000. A moderate plantation, with its fixtures, but without negroes, would have been thought cheap, when I was there in the spring of 1825, at $100,000. Sugar then gave from 5 to 6 cents per lb., on the river plantations, dependant upon quality. Lands have greatly fallen since, but so has sugar. After as careful examination as I could give to the plantations, above and below New Orleans, for a few miles, my conclusion was, that 800 lbs. of sugar to the acre was about the average crop, cultivating six acres to the laborer, three in plant-cane, and three in ratoons, which is a second growth of cane from the roots of the previous year. But this was the entire crop; there was neither corn, nor wheat, nor even oats, all of which would have grown well upon this fat alluvial soil. But the planter's land had under better auspices, and with better prices for sugar, cost him too much to be so employed. To the upper Mississippi, then, he was indebted for the necessaries, and for most of the luxuries of his living. He had neither cattle, sheep, nor poultry of his own raising; he had all these in abundance, and cheap, and they were brought to his door; but still they cost money, and that money had to be earned by more energy, by more of industry, and by more of the lights of philosophy, carried into agriculture, taken as a whole, than I have seen in any country, either in Europe or America. Since the year 1825, things had grown worse rather than better in Louisiana; for the seasons had become cold, the elements appeared to have broken loose from all constraint. One season poured down rains for months, and the next denied a shower, for long periods, to the hardened and suffering soil. This long continuance of bad seasons, had driven the ten or twenty planters upon the coast of Georgia, who were growing sugar upon a large scale, to turn to something else, and the more readily because if one cultivated highland, he returned to his cotton crop; he had only divided, never altogether abandoned cotton. With the grower of sugar upon river-land in Georgia, the case was still better; he turned his whole attention to rice, which retains more of its ancient value than any other cultivated crop in America, hemp excepted.

In consequence of the various soils in which it was grown, I think the average crop in Georgia should not be put at more than 500 lbs., (except on river-lands, where it gave 1000 lbs.,) in the place of 800 in Louisiana; but otherwise, the cultivator was in better condition, for he produced upon his plantation all he required for his people or for himself. All of us still plant a few acres of cane, to make a little sugar and molasses for our own use, and for plantation use. Our machinery stands still. My own, that cost me more than it ought, from having begun my operations during the embargo of three years, which forced me to expedients that cost me a great deal of money, and which of course I abandoned as soon as I had an opportunity, at the close of our late war with England: an idle war, in which neither country gained anything; and in which both countries lost what neither has to this hour regained. From these causes, my sugar establishment cost me $30,000. My friend, Mr. Hamilton Cooper's works are finer than mine, and he tells me cost $25,000. We both have *sabby* buildings; an artificial stone made of equal portions of lime, sand, and broken oyster-shells, but which is equally good of broken stone or gravel. It was around walls at Seguntum, built of such materials, that Hannibal and Scipio battled, and which are imperishable.

Mr. Cooper's buildings of sabby are 140 feet by 40, one elevated story. This building held, first his steam-engine, carrying a very large horizontal mill, which cost 500 pounds sterling in England. My sugar-works consisted, first of a vertical-mill, which cost me two prices, and also an extraordinary sum to a Jamaica mechanic, to put it up. The copper to make my boilers, was purchased at 62½ cents per lb., and I had to hire an indifferent copper-smith at $4 per day, to put them together. I afterward procured a horizontal mill, from West Point, the best mill I have ever seen, and excavated a basin to take in tide-water, so as to work my mill by the tides. The objection to this is, that you can of course only work from 10 to 12 hours in the 24, and frost is treading upon your heels; for you have but two months, instead of six, (as the West Indians have,) to take off your crop. And yet the man of Louisiana, makes from his six acres of cane in two months, more than the man with his one acre made in six months, in Jamaica. For Bryan Edwards tells us, (himself an extensive planter in Jamaica,) that one acre of cane to the hand, produced a hogshead of sugar, or 1,600 lbs. in England, (after the drainage of a sea voyage,) and was about the average of the Jamaica sugar-crop.

In Georgia, my opinion and my advice was, to plant two acres of sugar-cane, and two acres of long staple-cotton, or three acres of rice, to the laborer; because you harvested your rice in September and October, and you manufactured your sugar in November and December; so that there was more time given, and more harmony of operation in this divided crop, with either cotton or rice. To conclude then, what I have to say, as to the introduction of cane and the manufacture of sugar in Georgia, it is only necessary to add, there is now not one planter growing it as his *entire* crop; but there are five hundred manufacturing sugar for home uses, and that of a good quality; and the number is increasing every year. Nor is the day distant when from Savannah river to the boundary of Texas, and 150 miles from the sea, every planter will make his own sugar, by a small mill of three vertical rollers, made of wood, (except the cog-wheels, which are made of cast-iron,) the centre roller turning one on each side, this taking the cane twice through; as after passing one side, it is returned by the opposite röller. These domestic mills cost $25; the two iron kettles cost according to the size, from $30 to $40 for both. This mill is worked by a single horse. A man and his wife, and a child or two, can manufacture in two or three days, from 2 to 4 flour-barrels of sugar, and it makes to himself and family a little season of festivity. In my next I shall speak of the manner of cultivating the sugar-cane.

THOMAS SPAULDING.

Sapelo Island, Ga.

SAXON-MERINO SHEEP.

BEING engaged at the business of wool-growing in this part of the state, I have taken the liberty of sending for your inspection, a sample of wool from one of my bucks, which for fineness of fleece I think hard to beat, even by some of your veteran wool-growers of the north. My bucks were principally selected from the flocks of Mr. M. R. Cockrill, near Nashville, Tennessee, who has been engaged at the business of growing of wool for the last 30 years, and whose flocks have sustained a high reputation for fineness of fleece. From my experience in the business, in this part of our wide country, I am convinced that this portion of the state of Mississippi, which is a dry and rolling country, is well adapted to the growing of fine wool. Sheep subsist here almost the entire year on the range in the woods, which is very extensive.

The lands in this section of the country, and in an eastward direction, consist principally of a light sandy soil, not heavily timbered, and much open; the bushes being killed by annually burning out the dead grass and leaves which cover the ground in autumn. This climate appears to be admirably adapted to the nature of the Saxon-Merino, (the only variety of the Merino that I have yet tested,) the fibre of wool growing somewhat finer than it did on the same animal about two hundred miles north of this place, and evidently an enlargement in the carcass of the progeny. My flock is acclimated, and I intend keeping a supply of fine bucks for the benefit of any of my friends who may wish to improve their flocks.

Can you inform me whether or not a good shepherd can be procured in your city, and one also that combines a thorough knowledge of shearing? If a foreigner, a Scotchman would be preferred.

SAML. F. CHRISTIAN.

Holly Springs, Miss., Feb., 1844.

The samples of wool received in the above, we have stated elsewhere, are very soft and fine, and compare favorably with our best Saxon-Merino wool produced at the north. As to a shepherd, we know of no one in particular at present, and shall be obliged if any of our friends who do, will correspond with Mr. Christian on the subject.

ODD ROWS OF CORN.

ON page 26 of January number, you ask why an ear of corn with "21 rows *exactly*, neither more nor less," should be termed "anomalous?" The reason why I should so consider it, is, that I have never yet (though I have in the course of my life counted probably thousands) seen an ear of corn with an *odd* number of rows.

Sam Weller, or some other one of Dickens' characters, asks a man, "Did you ever see a *dead* donkey? Did you ever see any man that *ever saw* a *dead* donkey?"

Now, Mr. Editor, until I have had the pleasure to see you, and I hope my thread will not be cut before I do, I can say that I have never yet seen the man who could say he had seen an ear of corn, the rows of which were not of *even* number. You may dismiss all doubt about having seen ears of corn with *as many as* 24 *rows*. Any one who cultivates the genuine yellow gourd-seed corn, long narrow grain shriveled at the top, and much resembling the seed of some gourds, can no doubt send you ears with 24 rows. That was a favorite corn with my father, who would not sell ten bushels in the ear for less than six bushels of shelled corn! The usual allowance is one half, but he always told the purchaser if he was not satisfied to take it at that, he would have it shelled, and both parties must abide the result. He had his seed-corn from year to year selected from the whole mass, choosing always such, if the ears were perfect, as had the greatest number of rows. I often when a boy assisted in the selection, but never met with a single instance, or ever heard of one, where the number of rows was an *odd one*. I have seen many ears ending with a less number than they began, but *always* with an *even* number. So too, you will see some ears grow larger at the top end, the season perhaps proving more congenial just at the time when nature asserts her influence, to finish that part of her process.

As to the number of rows on an ear of corn, I have seen several bred in the way that has been already mentioned, which had 40 rows! I might not venture to say it, were it not that I once sent forty miles to get one, by way of demonstration, and that I can refer for the accuracy of my memory and statement, to one whose memory is the best I ever knew, and whose word was never yet doubted—the time-honored and venerable Judge Gabriel Duval. If you can send the ear of corn to Washington, "with 21 rows exactly—neither more nor less," it would be a curiosity in the Patent Office.

A story is told of a slave who was offered his freedom, on condition that at husking-time he could find an ear with an odd number, and it runs that when the corn was young in milk, he cut out one row, wrapped it up again, and that the scar could not be seen, and so he got free. J. S. S.

Washington, Feb. 8, 1844.

It is possible that we were mistaken in the number of rows in the ear of corn alluded to above by our facetious correspondent; but, nevertheless, we think we were not; for, as before observed, we counted them *twice*.

THE CULTURE OF TOBACCO.—NO. I.

In the uplands of Virginia, the common method adopted in cultivating tobacco, is to clear new land every year, or every two or three years; in this way tracts not remarkable for fertility are made to produce that staple. In low lands and where the soil is rich, a tobacco-crop may be obtained every two or three years for a length of time, but in poor new lands, or such as are of mean quality, there are only a few crops, sometimes not more than two or three raised before the land becomes unfit for its culture without manures.

The object of this paper is to show what are the causes of sterility as respects tobacco, and by what means land may be improved, and kept in good condition for that important crop.

The first point which challenges attention, is the fact that new land, however poor the basis may be, unless rocky, will produce fine plants; and tracts that have run to waste, and been covered with old field-pine, after a time, when cleared again, yield an excellent crop. As far as the eye can discover any difference between new lands and those that have suffered under the exhausting tillage of new countries, there appears to be a difference only in the quantity of decaying leaves which abound near the surface. In tobacco-tillage these are carefully covered by the hoe before spring, and thus whatever benefit arises from their presence is secured to the plants. Many persons regard these leaves as nothing more than so much *humus*, but upon examination they are found remarkably rich in saline matters. It would be unnecessary to say anything of their origin, were it not that much confusion, the result of the want of a scientific ground-work, exists among practical men on this subject.

The vegetable kingdom, as respects the food of its highly organized individuals may be said to consist of two dissimilar classes. Some plants are the natives of the mere mineral earth, they flourish on lands which are without vegetable, or organic matter of any kind, provided all the mineral substances they require for their structure is present in the soil. Such plants draw all their gaseous food from the air, and are necessarily the earliest inhabitants of the earth. Numerous forest trees, natural grasses, clovers, spurry, &c., are of this extensive family. Many individuals are unable to grow except on what the farmer terms poor land, or such as is destitute of humus. The result of the continued growth of such plants upon bare clay, or sand, is to accumulate vegetable matter. This is effected by two processes; by the death of the roots, and by the fall of leaves, or both these actions occur together. In the forest, roots are produced in sufficient abundance; but the annual layer of leaves which fall are of much more importance than roots, because the latter soon penetrate beyond the slender radicles of most annual plants, and contain but a small fraction of the saline matters leaves possess. On the other hand, grasses when cut or grazed add to the soil by the remains of the roots of previous crops. These, although decaying with readiness, are less rich than the falling leaves of trees. If the grass or clover be uncut, then the accumulation becomes exceedingly rapid.

Another tribe of plants is found only upon lands rich in vegetable matter, such are the Jamestown-weed (*Datura,*) various worm-seed plants (*Chenpodium*). These are entirely without cultivation, but they require a portion of their food besides mineral matters from the earth. They are rich in nitre and ammonia. Every planter knows that the weeds which appear upon new lands are different from those of worn-out lands, and for no reason but that they consist of such plants as require the presence of decaying vegetable matter in the soil. As soon as that disappears, they die away, and are replaced by plants of the foregoing class. This point is here insisted on, because, agricultural chemists have overlooked the specific differences which exist in plants as respects food. It has never entered the imagination of zoologists to conceive that all animals browsed on the same herb. The distinction may not be as great in plants as in animals, but it is worthy of attention.

Besides these natural classes, the planter is interested in another race of vegetables—those that are the produce of cultivation, such as wheat, cabbages, potatoes, &c. If the difference be examined between the wild cabbage and potato, and the garden specimens, as respects soil, it will be found to consist principally in the large quantity of mould necessary to their cultivation. These points, simple as they may appear to the practical man, must be clearly apprehended as the basis of many important principles in agriculture, and with the view of applying them in the case of the tobacco-plant, they are here introduced.

But, before I proceed farther, it is necessary to remark, that the facts narrated have no connexion with the *humus doctrine.* Liebig's writings have introduced to the agricultural world the speculation of a few unknown persons, that humus, *as such*, is the food of plants, and that the farmer has only to make it soluble to command any increase of crop. This hypothesis was really of little note until he built it up to combat. The use of vegetable matter in the soil is manifold and important; but so far as it constitutes a portion of the food of plants, it acts only by supplying carbonic acid, ammonia, and nitric acid, in certain forms to the roots.

Of the different classes of plants above enumerated, tobacco belongs to the tribe that grow only on soils rich in vegetable matter; it is, moreover, in the United States, a cultivated plant in so far as the leaves are much developed by the practice of topping or removing the flower-stalk. All plants of this kind that do not very closely cover the soil, exhaust it of vegetable matter; or, to write more correctly, during their cultivation the ground loses its humus, and after a few seasons it entirely disappears. As soon as this result occurs, tobacco can not any longer be raised without manures. Tobacco, therefore, requires more nitrogen in a form fit for assimilation for its cultivation than it can derive from the air; grasses and clover obtain as much as they require. It is well known to planters that tobacco contains nitre; by burning, carbonate[*] of ammonia is also given off from it. Both these bodies are obtained from food rich in nitrogen, and the larger the supply of vegetable mould, the richer the plant becomes in these bodies, as well as the oil to which it owes its odor and flavor, which is also nitrogenized.

But the supply of an increased amount of nitrogen is not the only office that vegetable matter performs in the soil. Those writers who have treated of the subject have omitted the most important function. It is notorious that in our country no tract of drained land which is rich in vegetable mould is sterile. Yet the same fields when impoverished lose their fertility, and may be reclaimed by a new addition of vegetable matter. This is true of most lands in new countries, the mineral basis of which has not been much altered by cultivation.

What then are the changes produced by the presence of vegetable matter in the soil that it should be so suited to fertilize lands? The mineral or bare soil consists of many chemical bodies insoluble in pure water, and yet essential to plants; such are bone-earth, carbonate of lime, and potash, which is present as a silicate. No insoluble substances can pass through the roots of a plant, they must therefore become soluble. As long as the earth is naked this takes place with extreme slowness, and only by reason of the carbonic acid present in rain-water, which gives it the property of dissolving a small quantity of bone-earth, (phosphate of lime,) and carbonate of lime, and changes the silicate into soluble pearlash, (carbonate of potash.) These changes are essential to the growth of plants; but on bare lands they take place to so limited an extent, that only slow-growing vegetables can appear thereon. But in soils rich in mould, there is constantly produced by its decay large quantities of carbonic acid, which acting in the same way as that present in rain, causes a very much larger proportion of the same minerals to become soluble, and fit to sustain the growth of plants by supplying them as fast as they are required. All American soils are rich in these insoluble mineral substances, although their quantity varies; it is, therefore, not surprising that the addition of vegetable matter, by rendering them capable of entering the roots of plants, should confer fertility.

The presence of vegetable matter in tobacco-lands has a two-fold influence in supplying the necessary amount of ammonia and nitric acid, as well as rendering potash, &c., soluble with sufficient rapidity, and this last property is much the most important. Tobacco planted out in June ripens by the middle of September; in less than three months it has taken up from the soil its mineral matters. The commercial specimens contain about 17 per cent. of ash, and an acre may yield about one thousand pounds, it therefore contains 170 lbs. of ashes, drawn from the soil in that short time, all of which must have become soluble.

But before I leave the subject of vegetable mould, it is necessary to remark, that the term humus applied to it by speculative agriculturists, has introduced a great deal of confusion into the science. Humus, regarded in a chemical sense, does not exist in the soil, for it is pure vegetable matter in a certain stage of decay; whereas, every particle of mould contains mineral matter, such as potash, bone-earth, gypsum, &c., which are by no means to be overlooked in treating of its action on plants.

The property of forming carbonic acid, and thereby rendering the insoluble bone-earth, silicate of potash, and carbonate of lime of the soil soluble, belong to humus; but as the vegetable matter decays, the mineral substances belonging to the leaves or roots from which it has been produced are also liberated and become food for the crop.

When tobacco is planted in newly cleared land, it is furnished most liberally by the dead leaves with ammonia, nitric acid, and the mineral substances present in them, independently of the soil; but in addition to this supply, the insoluble substances of the earth are rapidly rendered soluble to give it a further quantity of food. So long as the forest stood, it showered in every autumn its leaves as a top-dressing to the land. They consisted of vegetable matter, in the texture of which mineral substances were closely imprisoned, and liberated only with the slow decay of the leaf. The decay was slow, because during the warm months the ground was sheltered by new foliage; but as soon as this covering is removed, the hoe used to loosen the soil, plants with little shade introduced, the decay is rapid, and the supply of food keeps pace with it. These are the conditions which are requisite in poor lands for a tobacco crop, and as soon as they have ceased, its culture is arrested. In rich loams, where the solution of the minerals of the soil is much more rapid, and where 10 to 20 per cent. of vegetable matter is incorporated in the earth, tobacco may be obtained for many years, but it is always an exhausting crop.

It has been stated that 170 lbs. of mineral matter are removed in less than three months by a crop of tobacco from one acre of land. This is very much more than wheat or other grains carry off in eight or nine months. Thus wheat planted in October and cut in June, takes from the soil of the same mineral substances 22 in a crop of 20 bushels with straw. In these estimates the sand or silica is omitted, inasmuch as its supply is too great in all soils to cause any fear from exhaustion.

The important mineral substances present in Havana tobacco examined by Hertwig, (Liebig's annealon for April, 1843,) are:

Salts of potash......	34.15
" lime........	51.38
" magnesia....	4.09
Phosphates.........	9.04 in 100 parts ashes.

These substances were for the most part insoluble in the earth, and must have been dissolved during the growth of the crop.

We have now arrived at a clear view of the cause of sterility in lands as respects tobacco—saline substances and ammonia are not rendered fit for food with sufficient rapidity. We also see why a large amount of dead leaves, or other vegetable rubbish will yield a crop, by giving up to the roots a sufficient quantity of these bodies.

The great question is, whether there are economical means by which land which has lost the power of sustaining tobacco, can be rendered fertile and be maintained in that condition? This, which forms the second part of my subject, I reserve for a future communication.

D. P. Gardner, M. D.,
Lecturer on Agricultural Chemistry.
New York, April, 1844.

We really hope that no one will be deterred from reading these valuable essays of Dr. Gardner in consequence of his using a few scientific terms. Our readers will find them unavoidable, that he could not otherwise express his ideas, and that they are generally explained as he goes along. He treats his subject (the Culture of Tobacco) in a different manner than it is usually written upon; and his observations will be found worthy of all attention, especially by the Virginia planters, whose soil has become somewhat exhausted by severe cropping.

TO DESTROY WORMS ON ROSE-LEAVES.

I observed in one of the numbers of Hovey's Horticultural Magazine, published some two or three years since in Boston, that the cultivators of the rose in that city and its vicinity, had been, and were at that time, very much annoyed by the ravages committed upon the rose-bush, by a peculiar kind of worm, which destroyed the vitality of the leaves, giving them the appearance of having been scorched, and preventing the bush from blooming.

The cultivators of the rose in the city of Brooklyn, have also suffered in like manner, and by the same kind of worm, for these five or six years past. This worm is easily distinguished from all others infesting the rose-bush, by its peculiar manner of eating the leaf. They are in length from one quarter to three-eighths of an inch; the body slender, and of a very pale-green color. They appear in immense numbers, and are always found upon the upper surface of the leaf; and completely eat off all the soft green substance of it, (they never eat any other part,) leaving the original form of the leaf entire, and having the appearance of net-work, which soon assumes a brown color. There is no other worm which confines itself in eating, solely to the soft green substance; all others eating on the edge, and destroying the whole leaf. This particular difference renders it easy to distinguish them. They are peculiar to, and confine their ravages to the rose-bush; and I believe are never seen beyond the cities and their immediate vicinities, as I have not known the rose-bushes in the country to be infested with them. They make their appearance in June, and if not checked, will destroy every rose-bush in the garden, so far as blooming for that season is concerned. They disappear as soon as they have destroyed the leaves on the bushes.

My object, particularly, in writing this communication, is to make known the means of effectually preventing their appearance; and of instantly destroying them when they do.

I had for two years tried various experiments to destroy these worms, and preserve my bushes from injury, but did not succeed, until I thought of trying dry Scotch snuff, with which, for the last three years, I have fully succeeded in preventing their appearance, thereby obtaining a fine bloom of roses. For two years previous, my bushes did not produce a rose, the buds turning yellow and falling off, in consequence of the leaves being destroyed by this same kind of worm.

I use a round tin box, 2½ inches in diameter, and about 4 inches deep, perforated at one end like a pepper-box, with a cover on the other end, in which I put the snuff. With this I dust well all the leaves of my bushes, which should be done when there is no wind. To prevent, effectually, the appearance of these worms, the leaves should be dusted with the snuff as soon as they expand in the spring, and be continued once a week until the rose-buds begin to open and expose the petals, when it should be discontinued, as the beauty of the rose would be destroyed by being dusted with snuff. The worm above spoken of, seldom or never appears after the bushes have bloomed; at least, I have never seen them, where the snuff was properly applied; nor have I had occasion to use it after that time. The leaves are not in the least injured by the snuff, and can easily be rubbed off, leaving them perfectly green. Should its use be neglected until the worms have made their appearance, their ravages can be immediately stopped, by dusting them well with snuff, as they do not live but a few seconds after. Another reason for recommending the early use of the snuff, is, because of another kind of worm, which appears much earlier than the one first mentioned, and is to be found frequently in the folds of the leaves before they have expanded, so small at first, as scarcely to be seen, which perforate the young leaves and buds. This worm grows to the length of from half an inch to an inch, is of a green color, and has a brown head. After attaining a certain age they roll up the leaves, forming a webb inside, which the others do not. The early application of the snuff will prevent this kind of worm also from appearing, but will not destroy them after they have attained their full size, as it will the worm first mentioned.

M. Van Beuren.
Brooklyn, April 8, 1844.

THE PHYSICIAN AN AGRICULTURIST.

Apart from the debasing pursuit of politics, the physician of a village or remote settlement is often one of the most influential members of the community. Let me hope that you will not be wanting in your duty to your country. She has a right to expect from you, that you will elevate the general tone of society, and spread the arts and refinements of life. Wean the old, and preserve the young from debasing and immoral pursuits by encouraging a taste for reading and social intercourse. Be ever ready to join in associated efforts for the promotion of education, temperance, and other laudable objects. It is one of your peculiar privileges in the study of your profession, to have acquired a knowledge of vegetable physiology, and organic chemistry. This knowledge leads by easy gradation to the principles of agriculture—no longer a mere art, but in a state of transition, and destined soon to become a science. When we consider how large a portion of our citizens are engaged in this noble pursuit, what immense benefits may accrue to the country, by improvements in it—how must these improvements depend upon the union of science with practical farming, you can not fail to realize—how much is due from you to whom so much is given. Let me hope, gentlemen, you will encourage among farmers a taste for agricultural reading; that you will endeavor to break down the prejudices which practical farmers too often entertain against science as applied to their business, and that you will encourage them to give their children a good scientific agricultural education. I hope the day is not distant, when the legislature of this state will establish a school of agriculture.

You are now young, when you become old, the instinctive propensities of our nature given to man, when his Maker placed him in the garden of Eden, now kept in abeyance by other pursuits, will become predominant, and you will seek to pass the decline of your lives in company with Ceres and Flora. I can not wish you a happier lot than this, so fitted as it is for that tranquillity of mind, which leads to suitable preparation for our final destiny.

We have been permitted to make the above extract from the manuscript copy of the excellent address of Dr. Stevens, President of the College of Physicians and Surgeons of this city, at the annual Commencement, on the 14th of March last. We trust that the able and accomplished President of this Institution, will follow up these hints at his next annual address, with others on the propriety of the profession, when practising in the country, paying some attention to the pathology of animals. In the general absence of well-educated Veterinary Surgeons, physicians may do great good, and save many a poor animal much pain, and severe losses at times to the farmer; and in thus acting, they need not fear either *degrading* themselves or their profession, for in Europe nearly as accomplished an education is demanded of the Veterinary Surgeon, as of those practising among their own species.

AGRICULTURAL ERRORS.

So MANY glaring scientific errors find their way into our agricultural works, that I am afraid, unless rectified at home, they will make us the laughing-stock of Europeans. If these works had only a limited local circulation, such errors might be amusing, yet would scarcely be deserving of notice; but as many copies of our works on agriculture find their way to other countries, and are there perused by scientific readers, we must either criticise them among ourselves, or we shall be considered totally ignorant of the sciences we so glibly write about. I am sorry to undertake so disagreeable a task, and can assure the writers of the articles I am about to review, that I am totally unacquainted with either of them, and that my only object is to save the credit of our common country.

The first article I shall notice, is one written by Mr. Noyes Darling, of four columns, inserted in the Albany Cultivator for March, on lime as a destroyer of sorrel. Mr. Darling is correct in supposing that oxalic acid is formed from the elements of the plants in which it is found; but in error when he gives hydrogen as one of the elements of oxalic acid, this acid being composed of only two elements, carbon and oxygen. It is still more strange that Mr. Dana should prescribe lime as a cure for the growth of sorrel, when it exists in this plant as an oxalate of lime, and could not grow in any soil unless lime was present.

The juice of sorrel changed by a process, well known by the operative chemist, to oxalate of potash, has been much used in the arts, and sells at a high price. I have sold it at $3 per pound, and it is now selling at $1. There are about forty species of plants which contain oxalate of lime; four species that contain binoxalate of potash, and only one known species (the *cicer parietinum*) that contains uncombined oxalic acid. If this cicer could be cultivated in any part of our country, it would afford a valuable acquisition to the useful arts, in supplying us with oxalic acid, which is now imported at a cost of nearly 50 cents per pound.

A few drachms of oxalic acid will operate as a violent poison; but a small quantity with sugar and water forms a pleasant cooling beverage, and is considered a fine antiseptic. I have drank many gallons of oxalade, and punch made sour with oxalic acid.

I had written thus far when a friend handed me a work called the Muck Manual, by Mr. Dana, requesting me to review it. I had not read many pages before a suspicion flashed on my mind, that this work had been perused and taken for authority by Mr. Pell, and hence several errors in his article on "Charcoal and its Uses," in the April number of the Agriculturist. This shows the importance of professional writers being correct, and no excuse can be made for Messrs. Dana and Darling. They are my superiors in literature, and the scientific errors they have fallen into, particularly Mr. Dana, who I am informed is an analytical chemist, must arise from a want of due investigation.

I believe Mr. Dana is considered a good analyser of mordants and coloring-matter, and is of course a valuable citizen in such pursuits; yet it struck me with no little surprise, that a practical chemist should have adopted so wild and unsupported a theory. Chemistry is altogether a practical science, and the first lesson I learned forty years ago, was never to give credence to any theory that was not supported by direct and well-ascertained experiments. This axiom was established by the chemical savans of France in the early period of the science, and when departed from, the chemical world will produce theories as wild and unstable as were those of the old alchemists.

There appears to be a natural tendency in the human mind to sketch imaginary pictures, instead of troubling itself in tracing realities. If we enter a steamboat or hotel, it is much if we do not see some head hung up phrenologically mapped; we can not look at a paper, but we observe advertisements of a lecturer who talks about some epileptic, or cat-aleptic ladies, to prove mesmeric phenomena; and what is worse, a large audience looks on and sucks in the whole as established truths. Several attempts have lately been made by chemists of more or less celebrity, to run into unsupported theories, which require to be kept in check by the more sober portion of its followers.

Boullay, an European chemist, observed some few years since, a black or dark-brown substance which exuded from the bark of the elm, to which he gave the name of ulmin. It is very sparingly soluble in water, but readily soluble in solutions of the alkaline carbonates. He found its constituents to be carbon, hydrogen, and oxygen, and termed it ulmic acid. He considered it identical with the brown matter of vegetable mould, and as contributing materially to the nutriment of growing plants. Several chemists of the day pursued this subject and made rather a plausible theory from Boullay's discovery. It will surprise no one that Liebig should take it up, and pursue it with his usual transcendental energy; for even the acute and accurate Berzelius gave it credence for a time, but soon acknowledged his error.

There is no mistake in supposing that carbon, hydrogen, and oxygen, contribute very materially to the nutriment of growing plants, for we know that the greater portion of all plants are composed of said elements. Nor is there any difficulty in supposing the exuded substance contained an acid, as almost all the known acids found in the vegetable world are binary, or tertiary compounds of those three elements.

So far as I have read Mr. Dana's Muck Manual, he has founded the chemical portion of his work entirely on the now exploded theory growing out of Boullay's discovery.

I shall renew this subject in a future essay, and review Mr. Dana's work more in detail.

WM. PARTRIDGE.

THE ENGLISH OAK IN AMERICA.

A CORRESPONDENT in the American Agriculturist for April, seems disposed to throw the English oak into disrepute in this country, and recommends in its stead, the Turkey oak (*Quercus cerris*,) and the Tauzin, or more properly the Pyrenean oak (*Quercus Pyrenacea.*) It is to be regretted that any such ideas should have been brought before the public, as the English oak (*Quercus robur*,) is far superior to either of the other species in point of utility, hardihood, or picturesqueness of appearance. Yet the Turkey oak is a very desirable tree, both on account of its rapid growth and symmetrical form; and the Pyrenean oak well deserves a place in collections, from the beauty of its foliage and the singularity of its fruit. It is doubtful whether the latter is suited to our northern climate, as it does not ripen its acorns even in Britain, and besides, its leaves do not appear till three weeks later than those of the British species. It is also objectionable on account of its slow growth and the running of its roots near the surface of the ground to a considerable distance, and in throwing up numerous suckers. The Turkey oak, however, is a vigorous, growing tree, with an upright stem and a regular head; but neither its twigs nor branches have that tortuous or massy character which are so much admired in the British oak; nor is its timber so strong and of so great durability when exposed to the alternations of moisture and dryness. Like other trees of rapid growth, it soon arrives at maturity, and does not subsist so long as the English species. It is particularly adapted to our western prairies, where a rapid growth is desired; and for the information of those who may wish to make the experiment, I would inform them that acorns may be obtained at the London nurseries for $2,50 a bushel, and young seedling plants from $2,50 to $10 a thousand. Plants may also be had at the Flushing nursery for 50 cents each.

As was stated in the Agriculturist for February, the English oak is perfectly hardy in our climate, which has been proved by Mr. Derby; and when grown to any magnitude its timber is more valuable for ship-building than that of any other kind of oak, with the single exception of our southern Live-oak. As an ornamental tree, it is scarcely surpassed in picturesque beauty, and its history, as connected with the civilization of mankind, and the associations connected therewith, are sufficient inducements alone to cherish and perpetuate it.

B.

TORNILLO OR SCREW-GRASS.

HAVING noticed in great abundance on the plains of California, a wild grass of the leguminous species, which, for its great superiority over all other grasses in that country as a source of nutrition to animals, condensed into a small compass, and widely disseminated, I have considered well worthy of notice in your journal. By the inhabitants of that country it is recognised as the *tornillo* or *screw-grass*. It is scattered all over these plains, but in the greatest abundance on the gentle elevations of table-lands, between the rivers and creeks; the tall grass of the low lands gradually merging into this plant as the ground rises between creeks—the geographical character of the country. When fully matured, it acquires an elevation a little greater than that of the buffalo-grass of our western prairies, and is also similar to it in the general appearance of the leaves, and mode of distance at which they are given off from the root; the leaves, however, are broader at the base, and though rapidly tapering, are not *waved*, nor so numerous; there being but about about six from a single root stalk, which latter is prolonged into the seed-stem, eight or ten inches long, and terminating in a round, spiral-shaped head or pod, one inch long, and one quarter of an inch in diameter, and containing from ten to a dozen round and slightly compressed seeds, about the size of a split pea, and possessing a flavor very much like that of a bean.

The stalk pierces through the centre of the head; around it is wound in a spiral manner, a strong membranous riband-like ridge, commencing at the base of the head, and slightly tapering at its apex. This riband-like band is attached to the body of the stalk, in the centre of the head, by its edge, and is about three eighths of an inch wide; the seeds are enveloped in separate capsules attached within the spiral groove. Altogether, it has precisely the appearance of a *wood-screw*, only wanting the head and the color of that useful implement.

The beholder for the first time, will be forcibly reminded of the story of the Connecticut pedlar, who, upon returning to his friends, being requested to give an account of his adventures, affirmed that the soil about the Mississippi was so fertile, that the emigrant there had only to plant his crow-bar at night, to be ensured a rich crop of ten-penny nails next morning. Such at least was my first thought; wonder if it was not this plant, which afforded Archimedes that valuable hint on a certain occasion?

Cattle will not touch the screw-grass when green, preferring any other kind, of which, fortunately, there is always an abundance. But in the month of August the case is reversed; then, owing to the warm sun and droughts of summer, the whole country is parched, and the plains are covered with standing hay. At this time the screw-grass has reached its maturity, and is fully ripened; the seed-stalk has shrunk to one third its size when green; the seeds are feebly secured in their spiral-cells, waiting for the first strong breeze to scatter them upon the ground, or from the brittle nature of the stalk and disproportionately heavy tops, to decapitate the heads. Then the vast herds of cattle will leave the low ground for the table-lands. Cattle, horses, and mules, may be seen in every direction, picking up from the ground seeds and pods, as our own domestic animals pick up corn shelled upon the floor. The soil of the table-lands, being a clayey-loam, moistened for seven or eight months in the year solely by the night dews, which the morning sun speedily evaporates, is nearly as level and hard as a board-floor, enabling the animals to pick up with ease, even solitary grains. Where this grass is abundant, there is scarcely any other plant. The condition of the animals now rapidly improves; by the last of September or early in October, cattle have acquired their maximum of flesh, and are ready for the slaughter, when the ranchero or farmer realizes from their tallow and hides a handsome profit. In the spring he can buy or sell them on the hoof at about $2 per head, but if he has not been an unlucky gambler, he keeps them till they are *enveloped* in fat—thanks to the screw-grass—then knocks them on the head, and for the tallow and hide of a single animal receives from $6 to $8, and at times even $10, on board the shipping on the coast. Americans there must and do get rich; but it is as inherent in a Mexican's nature to gamble as to eat, and consequently every turn of a card helps to strip him of the only resource of wealth his bigoted nature will admit of.

The chemical analysis of the seeds of the screw-grass would show a great proportion of nitrogen, as well as fattening principles, and the proof of such combination is seen in the rapid increase of flesh, of animals which feed on it. The provision of nature with regard to this plant seems admirably adapted to California. One would suppose that she had taken into special consideration, the raising of stock in that country. She has spread out a beautiful lawn-like plain, under a genial sky, where there are no chilly frosts of winter to check the growth of the vast unsheltered herds, nor blighting winds of spring to make havoc among their tender offspring. She has furnished a luxuriant vegetation, stimulating its roots by the mild refreshing showers of winter, and sustained in its progress to maturity, by the fertilizing night-dews of summer, charged with saline vapors wafted in from over the boundless Pacific. By regular daily sea-breezes, nature modifies and rolls here the concentrated rays of the summer sun. She has also provided California a soil unrivalled in its yield; supporting immense droves of horses, so indispensable to the ranchero, for the collecting and guarding of his herds; the purity of the climate also wards off disease.

In the example of the screw-grass, nature has endowed it with a flavor, in its green state, repulsive to animals, by which, it is suffered to mature and fulfil its office; until then, the nutritious ingredients are in such a state of combination as to be nearly, if not quite, unfit for assimilation; but when ripe, and the seed is capable of reproduction, then the wonderful bounty of its Creator is manifested. Here he presents to the animal an unlimited source of food, unsurpassed by any other in richness of flavor and superiority of nutritious qualities.

The effect of screw-grass feed upon horses, displays its great value. It is astonishing to behold the difference previous to, and after feeding upon it. During the summer they are slowly regaining the flesh and strength (of which they were deprived by the young green grasses of spring) by feeding upon the gradually maturing vegetation. Then they are lean, spiritless, and indifferent to the approach of strangers, and very seldom seen to frolic or gambol; but after a few days or weeks rioting in the rich pastures of ripened screw-grass, a wonderful change comes over them. Now, instead of appearing listless, rusty, broken-down hacks, they are round and plump, with thin, smooth, sleek skins glistening in the sun; their movements quick and elastic, prancing and galloping about in circles, with their long flowing manes and tails waving in the air, they revel in the joyousness of health and pleasure. If man passes near them, they either follow to gaze at the bold intruder upon their wild sports, or gallop around him a few times, then suddenly dash off at their utmost speed, headed by some noble-looking fiery charger, and are almost immediately buried in the horizon, or enveloped in dense clouds of dust. The herdsman with his lasso, meets with great difficulty in catching them at this season; but not so during the spring and fore part of summer; then they are so spiritless and inanimate, as to allow in most cases the lasso to be placed around their necks without the necessity of a chase.

J. H. Lyman.

Buffalo, February 3d, 1844.

CLEARING FOREST LANDS.

In southwestern Ohio and Indiana, a large proportion of the uplands are timbered principally with beech, interspersed with oak, hickory, poplar, sugar-tree, ash, elm, maple, &c., and as you have observed the forests are dense, the timber tall, and generally heavy. Our method of clearing is this. In July and August, girdle everything in the forest great and small, reserving the rail and such other timber as you wish to preserve; girdle all the under-growth that you can well, (as it sprouts less when girdled than when slashed;) slash the balance and let it stand four or five years; as the timber begins to die, it should be sown with grass-seed of some kind, as it prevents the growth of briers, weeds, and bushes; besides, if fenced in, it affords considerable pasture. Those unacquainted with these deadenings would object to pasturing them, on account of the danger of having the animals killed and crippled by the falling of timber; but it is very seldom an animal is lost or crippled in that way, provided open spaces are made, to which they can retreat in case of storms and high winds. I have frequently noticed, even before there was much appearance of the coming storm, that the stock would retreat to an opening, or live timber; nevertheless, had I an animal of more than ordinary value, I would avoid pasturing it in a *deadening*. When a forest has been deadened four or five years, all the roots and limbs will have rotted, and much of the timber have blown down; then cut down the balance, *nigger* off the logs to suitable lengths for rolling, by piling chunks and small logs across them; during this operation, by attention to throwing up the small trash a great part will burn up entire. Then go in with a team and two or three men, heap up the balance, and fire it, and if you take a dry time for it, the work is soon completed by another burning. Now go over it and grub the green bushes, and your land is in complete order for a crop.

The expense of deadening here is 50 cents per acre; clearing off, from $3,00 to $4,50 per acre. A deadening ought not to stand over five years, and is generally in good condition for clearing up in four; if left too long, the second growth makes heavy grubbing; and further, it is the opinion of many of the most experienced and observing men we have in the country, that land cleared in this manner will ever remain lighter, warmer, and more productive; and is less affected by drought and wet, than lands cleared of all the timber while green. They refer to beech lands or where beech predominates; although all kinds of timber is generally deadened before clearing; if white-oak, the small growth is cut out and the large trees are left standing.

The sun must produce a powerful effect upon a soil stripped of the dense forest at once, and turned up by the plow to the scorching rays of the sun, where, perhaps, it has not been exposed for centuries. By the deadening system the sun's rays are let in gradually, not on the naked soil, for the carpet of leaves protect it; the roots and limbs rot in and on the soil, and form a fine vegetable mould, and the phosphates (in which Liebig says the beech is particularly rich) are all returned to the soil, which renders it lively, warm, and mellow.

We have ridges or belts of table-land, lying high and flat between water-courses, timbered principally with beech, that are partially covered with surface-water; the roots are all apparently on the top of the ground, the soil cold and heavy, which, if the timber is cleared off while green, are of little value for grain or grass. But if deadened and sowed to grass, (the red-top, *agrostis stricta*, of Muhlenburgh, grows well on wet lands,) and as the timber dies and falls, it is cleared up, and the land suffered to remain in grass for ten or twelve years, it becomes quite valuable. By this time the roots and stumps will all be out of the way; now harrow it well with a heavy harrow, sow red-clover, strike out some water-furrows with a plow to drain off the surface-water in wet weather, and the clover will take well generally. When the clover is in its greatest perfection, turn it under with the plow; and if lime can be had at a moderate price, give the land a top-dressing. This will prove highly beneficial in assisting to decompose the vegetable matter in the soil, correcting any acidity remaining in it, and warming and pulverizing the ground. The land now is well prepared for good crops of wheat, oats, and corn; and with a proper rotation of crops, clover and manure, it will ever remain productive. But I would prefer never plowing such lands; I think it better to let them remain permanently in grass, occasionally scarifying the surface, sowing fresh grass-seed, and top-dresssing with manure.

E. Carpenter.

Brier Patch Cottage, Warren Co., Ohio,
March 22, 1844.

We shall be pleased to receive the article on Woodland Pastures spoken of in a private note by Mr. Carpenter, and are quite obliged by his good wishes.

THE GEORGIA TABLE-PEA.

I have an excellent kind of table-pea, and if I knew you were fond of them, and had none of this variety, I would send you some, as I think they are so early, that they would produce finely even in your cold climate. You would probably call them a field-pea, as they have a leaf similar to the cow-pea of the south. They grow in bunches like bunch or bush-beans, and are planted at the same time, and in the same manner, and ripen nearly as soon. They require no sticking, as the vine does not run. We can make two or three crops a year of them here. The pod is 6 to 7 inches long and crowded with the peas, which are perfectly round and white. They are excellent for cooking, either green or dry, but are best when beginning to turn. They are said to be the best variety in Georgia, and can be had green from June until October.

We have a fine prospect for wheat and other small grain this year. The spring has been mild, and our corn is now large enough to hoe. Cotton mostly planted and some just coming up. Fruit looks promising. D. B.

Bellevue, Talbot Co., Ga., April 15, 1844.

BERKSHIRE PIGS.

A YEAR ago last fall, after selecting my hogs for fatting, I had on hand about 40 pigs, consisting of culls, runts, and all sorts of outcasts from the piggery, and debated some time in my mind whether I would cut their throats and send them adrift, or winter them. But my kindlier feelings prevailed, and I resolved to winter them, or make the trial at least, as I had plenty of coarse feed. The winter, however, proved an uncommonly hard one, and 6 or 8 of the pigs died before spring. After the warm weather opened, they were turned out to scrub as they could, and through the summer foraged a tolerable living, partly in the woods, and partly in an old pasture. They thus remained, not having been fed at all through the summer, and grew tolerably. Early in September I put them into a neighboring distillery to fat on shares. The owner and myself estimating that after four months good keeping on slops, they would weigh about 150 lbs. net, on an average. At that time he had common hogs in his pens that would weigh over 200 lbs. alive, which were fed equally well with mine till slaughtered.

My pigs, 32 in number, were fed five months, and slaughtered. Their net weights were from 206 to 295 lbs. each, averaging 240 lbs., and outweighing the common hogs fed side by side with them, which were double their size when shut up. These Berkshires would have weighed but little over 100 each, alive, on the average, when put up. The pork was very fine, and the hams, shoulders, and jowls I have never seen surpassed. The slops were of corn chiefly, and very rich, and thick. The proprietor of the distillery has had great experience in fatting pork, and he declared to me that these Berkshires had done better by 25 to 50 per cent., than any other hogs he had ever fed. He never had any Berkshires before these which were throrough-bred. There can be no doubt of the superiority of the Berkshires as a feeding hog.

L. F. ALLEN.

Black Rock, Feb., 1844.

GRAFTING.

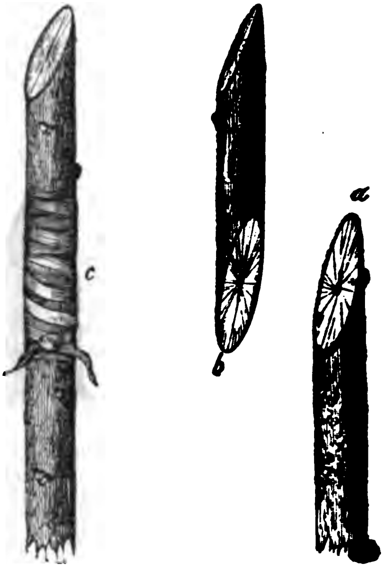
1. IN general, select your scions from the outside branches of healthy trees, just in their prime, or at full bearing, about midway in their heads, and rather on their sunny sides, where the juices of the wood have been properly digested by sun and air. Let them be the young shootings of last summer's growth; but in old or sickly trees, take them from the most vigorous branches in the centre of their tops. Grafting may be performed, however, with the shoots of the current year, as well as with those of several years' growth.

2. Cut your scions several weeks before the season of grafting arrives, in order that the stocks may advance over them in forwardness of vegetation, and bury them, of full length, in dry earth or clay, which must be kept out of the reach of frost till required for use.

3. The best time for grafting is when the sap of the stocks is in brisk motion, which occurs in deciduous trees a few weeks before they put forth their leaves; but reproductive evergreens may be grafted during summer as well as spring. The periods of the flow of sap should nearly coincide between the scions and stocks.

4. After making choice of the proper season, and all things are in readiness, let the operation of grafting be performed as quickly as possible. For dwarf trees, head down the stocks to within a few inches of the ground, or even below the surface. For standard trees, or those designed to obtain their full height, engraft on vigorous branches, situated about midway in their summits, and well exposed to the sun and air. Ordinarily, the scions may be from one fourth of an inch to one inch in diameter; but if necessity requires, they may be much larger or smaller. Let the stocks and scions, if possible, be of the same thickness, in order that the inner bark of both will exactly unite, and facilitate the flow of the sap. The middle portion of the scion is best; but when there is a scarcity, both the top and bottom parts may be used. Take off a little of the lower end of the scion first, and then cut it in length, so as to leave from two to five eyes or buds for the production of branches, always taking care to cut off the top in a slanting direction. Two eyes will be sufficient for a standard tree, but four or five are better for dwarfs which are intended to be trained.

5. For small grafts, less than half of an inch in diameter, adopt the *whip* or *splice* method.

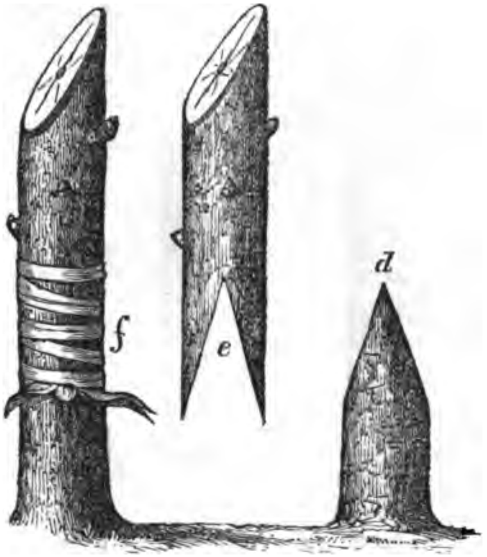


SPLICE-GRAFTING.—FIG. 39.

Cut the stock *a* with a sharp knife, in an oblique direction without starting or bruising the bark, and the scion *b* in like manner of a corresponding angle. And then, with as little delay as possible, place the inner barks of the stock and scion in perfect contact, at least on one side, and bind them fast together with a riband of bass or guana, as indicated at *c*. In this part of the process, ***take particular pains*** and see that the junction of the two barks is not in the least displaced.

6. To protect the grafted parts from drought, air, and moisture, a layer of green cow-dung, and fresh loam, well mixed in equal proportions, should be applied with a trowel or spatula, one inch thick on every side, and a little above and below the union of the stock and the scion. A mixture of three parts fine clay and one part of fresh horse-droppings, well incorporated together, may also be applied with success. A bandage of moss or tow is sometimes wound round the clay or mixture, to prevent it from cracking by the heat of the sun, or from washing away by rains. In making the incision in the side of the stock which is to receive the scion, the knife ought if possible to be entered at the base of a bud, and pass upward. The reason of this is, that the vital principle is more powerful there; and that the germs, both of buds and root, are, in most plants, confined to the joints of the stems; though in some, as in several varieties of the elm, they appear to be distributed equally over every part of the stem and roots.

7. For grafts, for half of an inch or more in diameter, it is preferable to adopt the ***saddle*** mode of grafting.



SADDLE-GRAFTING.—FIG. 40.

Cut with a sharp drawing-knife or other instrument, the stock *d*, so as to leave the top in the form of a wedge, split the lower end of the scion *e* wi[illegible]a fine saw, or otherwise, and pare each side of the incision, so as to fit, when seated exactly on the top of the stock, with the inner barks in perfect contact. And then, with a bass riband, bind th[illegible]arts strongly together, as at *f*, and perform the operation of claying as in the preceding method. In grafting, as well as in transplanting trees, particularly those which are liable to be affected by the change of situation, as the magnolias, walnuts, &c., they should always be planted or inserted in the same position, with reference to the sun, as that in which they grew previous to their removal.

8. Generally speaking, in three months or more after grafting, remove the clay, and partially loosen the bass ribands which are bound round the grafts, in order that the scions may have more room to expand. In a few weeks more, when the buds have been partially inured to the air, and when there is no danger of the scion being blown off by the winds, the whole of the ligature may be removed. Should the grafts have much lateral motion, caused by the wind, they should be secured to a stake or frame.

All ordinary grafting may be performed by the two preceding methods, the latter of which has been successfully applied to the walnut, where the scions employed were allowed to unfold their buds and grow a few days before the operation took place; and out of 28 experiments 22 succeeded.

There are more than thirty methods of budding, and twenty of grafting. Leaving the wood upon the bark in budding is classed under grafting. There is no particular advantage in this mode.

D. JAY BROWNE.

Read before the New York Farmers' Club, April 9, 1844.

A MOVEABLE-FENCE.

A NEIGHBOR of mine has just commenced the construction of a cheap moveable-fence, which, so far as my observation extends, is an entirely new plan. Each section consists of three plank-posts, two or three inches in thickness, 15 inches wide at the lower, and 3 inches wide at the upper end; having one perpendicular edge, and one angle, *fig.* 41. A plank-post of dimensions given; *b, b, b, b, b*, boards nailed on to edge of post. The two end posts have their edges parallel with each other, while the middle one presents its perpendicular edge to the plane of the perpendicular edges of the other two, at a distance just sufficient to admit the thickness of a board between them, *fig.* 42. Boards of a suitable thickness and width are nailed on to these, and each section is placed on a line end to end. It will be seen that these sections are supported by a base of 31 inches, thus render-

FIG. 41.

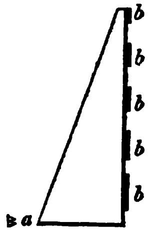
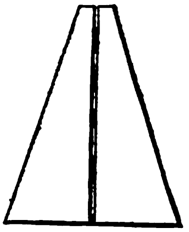


FIG. 42.



A MOVEABLE-FENCE.

ing them perfectly secure against overthrow by winds or unruly cattle. It would avoid the necessity of double posts where the sections joined, by substituting mortices to receive the boards, by which each end-post should be made to admit the end boards of double sections, and the convenience of moving by withdrawing the boards, would be thus facilitated. R. L. ALLEN.

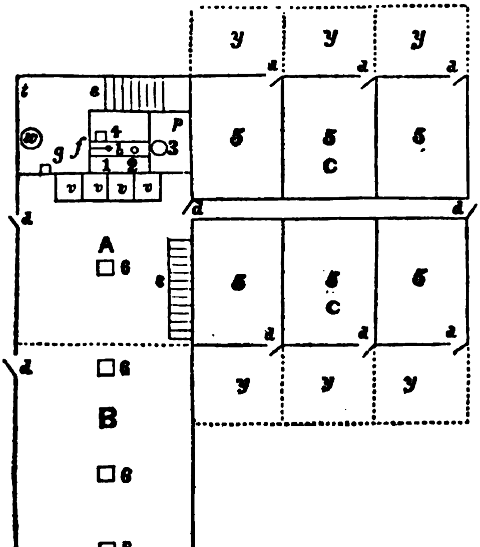
Buffalo, 10*th March*, 1844.

The above was forwarded us at the time of its date, the writer not having at that time seen anything of a similar kind, which has since appeared in other papers.

A PIGGERY.

In constructing a piggery, I went upon the principle that a judicious outlay of capital upon a farm in necessary buildings or other improvements, increases in a much greater ratio than the interest, the productiveness of the capital already invested; and also, that to farm profitably, there must be a regular system in the management of every branch of business. Thus, there should be a place for horses, carriages, harness, grain, and hay, all under one roof if possible; and in like manner, for all other kinds of stock; and in particular, a place where we can keep swine, from the pig to the porker, with all their feed convenient and at hand.

A PIGGERY.—FIG. 43.



A, B, front, 60 feet by 20, the part A, 2 stories, or 13 feet posts; the other part C, C, rear for pens, 30 feet square, 7 feet posts; 5, 5, &c., pens 13 by 10, alley 4 feet wide; *v*, *v v*, *v*, vats on a level with pens; 1, safetyvalve; 2, steam-pipe; 3, supply-barrel to boiler *b*; *f*, furnace; *p*, platform, part over boiler; 4, chimney, 8 inch stove-pipe, with damper; *t*, drain; *w*, water-cistern; *g*, door to cellar; *s*, *s*, stairs; *d*, *d*, doors; 6, 6, &c., scuttles to cellar; *y*, *y*, &c., yards to pens.

The piggery is designed for fattening from 50 to 60 pigs annually, and the fixtures have been made with that reference. By the annexed plan, it will be seen that it has a front of 60 by 20 feet; the first 30 feet having 13 feet posts, the other 30 feet but 7 feet posts. The first floor presents a room 50 by 20 feet, 10 feet from one end being taken for a boiling-room, or rather for a furnace and boiler, as all the cooking is done on the floor which is on a level with the pens. The rear is 30 feet square, 6 feet posts, an alley 4 feet wide through the centre. There are 3 pens on each side, 10 by 13 feet, each pen will accommodate 7 large hogs, or 8 middling sized ones, while fattening.

Under the main building is a cellar 20 by 60, 8 feet deep, 10 feet from the east, and is walled out and no floor laid over it. Here is a boiler made from sheet-iron, not so thick as boiler-iron, but a medium between that and stove-pipe iron, 6 feet long and 24 inches in diameter, set in brick-work. It has a safety-valve, and water and steam-cocks, &c., and is capable of working 45 inches, but is never used beyond 18 or 20. The steam is carried from the boiler to a series of vats on the floor adjoining, constructed as follows: The outside is of 2-inch pine-plank, 12 feet long in the clear, grooved, matched, and keyed together into one bin or vat 3 feet deep, and 4 feet wide. It is divided into four equal parts by tight partitions of the same material, so that we have 4 vats 3 feet deep, 3 feet wide, and 4 feet long, holding about 7 barrels of liquid, or 22 bushels of vegetables. All the food is cooked in these vats by the steam, and fed thence to the hogs. All unnecessary labor is saved, as the food does not have to be handled after filling the vats until it is fed out.

The building is double-boarded, the floor over the cellar is lined and has scuttles. The hog-pen is also double-boarded; the front fitted with swing-doors, so that the hog can go out and in at pleasure, and still keep the building warm. Over each door is a window 6 lighted of 7 by 9 glass; attached to each pen is a yard 12 feet square. Two of the pens have double-doors, and can be used for tying up cattle. A floor is laid over-head, which gives a fine room for storing soft-corn or other food. The second story is very valuable for a storage room. The cellar will hold a large quantity of roots and apples. Thus we have a place to keep our hogs and their feed, whether green or dry, and prepare it all under the same roof. The piggery has been in operation four years, and has fully answered our expectations in every particular. T. C. PETERS.

Darien, N. Y.

TO KILL LICE ON CATTLE.—Mr. Starr, of New Jersey, informs us, that scattering buckwheat flour plentifully over lousy animals, is an effectual cure for them. We presume other kinds of flour would do just as well. One of the best things we ever tried, was rubbing our stock well with rancid lard, or whale, or tanner's oil. The Boston Cultivator recommends washing the animal a few times with a decoction of red-cedar bark.

A PENNSYLVANIA DAIRY.

I NOTICED with much pleasure the remarks upon my dairy in the December number for 1843, by one of your correspondents, and it has been a source of considerable regret to me, that I was so unfortunate as not to be at home when he favored me with a visit. This was owing, however, to a slight misunderstanding between us. I was under the impression that he had appointed a day later than the one upon which he came, but as regards his viewing the place, perhaps it was not so unlucky as I at first imagined; for he saw whatever he examined, in its every-day appearance. He expressed a desire that I might be induced to give you a description of some articles which he named. I consider that desire a sufficient inducement, and will endeavor to describe such things as I believe worthy the attention of an inquiring practical farmer.

I farm about one hundred acres of gradually undulating land, and so divided into lots, that a constant stream of water flows through each one. I will not detain you with the minutiæ of the farm, but merely mention that we have five acres of the best ground appropriated to gardening. We have erected convenient hot-beds, for producing the earliest vegetables, and we pay much attention to the growing of choice and early fruit; my wife takes pleasure in superintending these things. Three o'clock every morning finds her employed, and each market-morning she offers for sale the products of her industry, arriving in the city of Philadelphia, a distance of over 4 miles, generally before the lamps are extinguished; but she never sells butter, as we have sometimes to purchase for our own family. I keep constantly about 45 milch cows, and 6 or 8 dry cows, which must be of the best kind or I part with them, and a thorough-bred Durham bull, of whom I am particularly fond, either because we raised him ourselves, or because I prefer the Durham breed, both for beauty and utility. The barn is built of stone; it is what is commonly called a bank-barn, with substantial walls, 104 feet long, 45 feet wide, 50 feet high, with steep roof. In this I have a coach-house 35 by 10 feet; a harness-room, which, though small, is very useful; a carpenter's shop in which there is a bench, with a variety of tools, so that if necessary we can manufacture a wheelbarrow, and do almost any work that is required about a farm, (no economical farmer should be without such a shop;) a thrashing-floor of the best plank, 45 by 17 feet; and adjoining this floor, a corn-crib attached to and projecting from the wall. In the lower part there is a room set apart for vegetables alone; this is 45 by 19 feet; also two lines of horse-stables 45 feet long, containing 10 stalls each, and between which there is an entry 7 feet wide, having a mortar floor; into this a funnel empties leading from the very top of the barn, and down which hay, &c., can be passed without any difficulty. We have always about 8 horses, so that one of these stables is appropriated to the calves and heifers. The calves are removed from their dams when only a day old. Projecting from the main building there is a wing forming a right-angle with it, 106 feet long, by 24 feet wide; at each end of this wing a row of stalls runs parallel with the end walls, and between these there is another line parallel with the side walls, extending the full length between the end stalls, except allowing 2 feet at each end for a passage. The stalls are each 6 feet 2 inches long, and 3 feet 2 inches wide. The cows are fastened with the old English rod and chain, so constructed that when the cow lies down or arises, the chain moves with perfect freedom and without the slightest danger to her. Yet for keeping each cow in her proper place, behind the stalls there is a drop 14 inches wide, and 4 inches deep, and as the bedding is all cut fine, we have but little trouble in removing the offal. Between one wall and the drop there is a space of 6 feet, well planked and always covered with clean cut-straw; in this space there are tables to place the milk utensils upon, where they are free from harm. In front of the stalls there is an entry about 10 feet wide, with two flues or funnels, similar to those in the horse-stable.

For the dry stock we have a separate stable, 45 by 21 feet; joining the wing in this is the steam apparatus, occupying, however, but little room; being surrounded by solid stone-work which is in length 14 feet 4 inches, in width 5 feet 6 inches, in altitude 5 feet 6 inches. The fuel used is coal, and for a chimney we have a sheet-iron pipe passing along the wall outside, much higher than the roof. The boiler is supplied with water from a pump constructed for the purpose, only 21 feet distant, and connected by a wooden trough emptying into the boiler, so that not a drop of water need be carried. Three pipes from the boiler pass into the 10-foot entry, where they are attached to a large vat. One of these pipes is for cold water, another for boiling water, and the third for steam, so that in slippery weather we can water the cows in the stables, without exposing them to danger, and we can boil or steam the food, as we think proper, but I am partial to the latter. The large vat is 14 feet 4 inches long, 5 feet 6 inches wide, and 2 feet 6 inches deep. Adjoining it are two small vats or coolers, into which the food is placed to cool. This food is generally a mixture of small potatoes, malt-dust, ship-stuffs, &c., &c., cooked together, with hay cut into about inch lengths, by Greg's invention, of Wilmington, Delaware, which works upon the fly-wheel principle, moved by a small force, and cutting at any length, from ½ inch to 2 or 3 inches. But no one can fully appreciate its merits until he has tried it.

Let us now look at the spring-house, &c., for a few moments. This house is arched and bottomed with brick, and the sides are of stone. It is 21 feet long by 18 feet wide, over an overflowing and powerful spring of water issuing from the rock. At the aperture in the wall where the water flows out, there is a small flood-gate, with which the water in the house can be raised as high as we wish, by which means the milk is preserved cool and sweet in the hottest weather. From the spring-house to the cow-stable there is a pathway, another to the horse-stable, and another to the dwelling; each 4 feet wide, laid with large flags, upon which we are able to walk from one place to the other in the most muddy season, both dry and clean. Opposite the spring-house, at the distance of a few feet, there is a cleaning-house 19 by 13 feet, where the churns, &c., are scalded and washed, in which is a copper caldron, and a stream of water runs through it constantly. Next to this there is a scouring and polishing-room 22 by 20 feet, and here the utensils are prepared to receive the milk.

If you should ever visit Philadelphia again, I shall be happy to see you, and show you many things which I can not now mention. If, however, I have engaged your attention thus far, or rendered you any service, I will consider myself amply rewarded.

HENRY CHORLEY.

Falls of Schuylkill, Feb. 6, 1844.

THE BEST SHEEP COUNTRY.

YOUR correspondent Americus asks, "Where is the best sheep country?" One answers in Kentucky, another in Louisiana, and a third in Iowa Territory. I am satisfied that Iowa Territory possesses peculiar advantages with regard to sheep-farming. Thousands of sheep may be fed upon our prairies through the summer, and kept at a comparatively trifling expense through the winter, to the advantage of the wool-grower. As an example, I would refer to the flock of Mr. Moloy of this county, consisting of about 700 fine-wool sheep. They are turned out to feed upon the prairie, attended by the faithful shepherd-dogs by day, and guarded by them in pens by night during the summer; in winter they are kept in appropriate pens with sheds, and fed with corn, oats, hay, and fodder produced by sowing corn broad-cast, &c., all of which our soil produces in large quantities at a small expense. It is a healthy country for sheep, as experience shows, from the rapid increase of the little flocks which almost every farmer keeps for his own domestic covennience, in connexion with the fact that disease is seldom known among them. Sheep-husbandry is becoming a branch of considerable interest among us. Several large flocks are kept in this county; the Messrs. Kilbournes have 1100 sheep, 600 of them full-blood Merinos, driven from Ohio last summer, and all doing well. Cattle of the improved breeds are very numerous here. Mr. Josiah Henkle has some of the finest Durhams and Herefords that I have seen. The Berkshire, Irish, and Russia hogs are also very numerous among our improved breeds.

Iowa Territory is of a rich fertile soil. The rapid improvements which have been made within a few short years and are still making, show that it is settled by an industrious and enterprising people. Agricultural societies have been formed, and exhibitions held in this and other counties. I was informed that some very fine specimens of fruit were exhibited at the show of the Van Buren County Agricultural Society, held at Keosauqua last fall. Some interest is manifest with regard to the silk culture here; several of our neighbors have fine lots of the Morus Multicaulis mulberry; silk-worms also have been fed, and silk manufactured to some extent. Wheat, rye, corn, oats, barley, hemp, flax, &c., grow luxuriantly here; cotton has been cultivated as an ornament in gardens, and grows to perfection. JEREMIAH F. HUNT.

Lee County, Iowa, Feb. 6, 1844.

VALUE OF AGRICULTURAL PAPERS.

I HAVE been a subscriber to agricultural papers for more than 20 years, and have paid for them over $100; and though I cultivate but a small farm, I am fully convinced that I have never laid out money, as a farmer, that has yielded me the same interest as that invested in the purchase of these valuable journals. It is not that a farmer can in such works learn everything he may want to know, or that he will be told everything that relates to his every-day business; but one of the greatest advantages to be derived from their perusal, is, the turning the mind to reflection—the cautions given—the suggestions hinted at—and the general principles inculcated.

ALEXANDER MCDONALD.

Eufaulla, Ala., March 2, 1844.

A NEW VARIETY OF SPRING-WHEAT.

THERE exists in this section of country a new variety (at least so considered here) of spring-wheat. The article was imported here a few years since from France, by a native of that country, who had there tested its virtues. The account given of it is this: In France it is called the bird-wheat, from a supposition that birds had carried the seed into a field of winter-wheat, from which it was originally selected by the owner of the field. On trial, it proved a valuable variety, and was rapidly extended. I think it is five years since it was first brought to this vicinity. Its reputation has increased with every year's trial, and the demand for seed this spring has far exceeded the supply, and this solely on account of its intrinsic merits, as I conceive, for no mention of it has ever been made public, and a knowledge of its existence (in this country at least) confined to a small district, comparatively.

The wheat is four-rowed and bearded, very strong stem, and can not be over-fed so much as to cause lodging, as the straw is very thick and firm. It is a great producer in good soils. Such is the character of the spring-wheat as I obtain it from an Englishman, a gardener by profession, who is neighbor to the introducer of the wheat into the country, and a pretty close observer of everything connected with agricultural interests.

JOS. C. G. KENNEDY.

Hillside, near Meadville, Pa., 30th April, 1844.

ADDITIONAL PREMIUMS.—At the last monthly meeting of the executive committee of the New York State Agricultural Society, premiums for Jacks and Mules were added to the list. Whenever anything additional is desired, it is only requisite to address the recording secretary, at Albany, Mr. Henry O'Reilly, who will take the earliest opportunity of bringing the suggestion before the executive committee. The society is disposed to be as varied and liberal in its premiums as its funds will admit.

NEW JERSEY FENCES.

Being placed in circumstances which rendered the subject of the following observations of peculiar interest, it occurred to me that some of your readers might be in a situation which would render a communication on the subject not wholly unworthy of attention. That this matter will increase in interest with the cultivators of the soil in the older parts of the country, must be apparent to all who have given the least attention to the subject. Few now contemplate the purchase of a farm without making the state of the enclosures a paramount consideration—and not without reason. The supply of materials for the kind of fences hitherto in use is daily becoming more limited, consequently the expense increases; and the farmer finds that the fence is not one of those small secondary matters which his fathers before him considered it. Those upon old farms, with fences made to hand when they came into possession, do not seem to be aware of the call soon to be made upon their pockets. Let such look into the matter.

I was lately much surprised by the result of a calculation, made to ascertain the expense necessary to enclose and subdivide one hundred acres into fields of ten acres each. The estimate was made for that fence which our farmers (judging from their practice) think most economical. It was found that near 15,000 rails would be required, which at the prevailing prices, $3 to $4 per hundred, with the cartage included, would cost $7.50. This calculation is made for rectangular fields. From the statements of the agricultural writers, and some observation, it is thought that the expense would vary but little in any part of the country from this estimate. Some practice and experience have since shown that it is rather under than over the mark. I propose to give a short statement of the expense, and a few observations concerning the various kinds of enclosure now in use in the northern part of New Jersey.

These are the Virginia or worm-fence, post and rail, or boards, and stone wall. For the first we generally use the cheapest quality of rails, cut 11 feet long, laid at a lap of 8 or 10 inches on each end, and an angle of 25 degrees across the line of fence, put up 6 rails high, with stakes and riders to complete and confine the whole. Two lengths or panels make but little more than one rod, and costs here as follows:—

14 rails, at 3 cents,	42	
cartage,	25	
setting,	10	77 cents.

The two stakes in each panel are estimated as one rail, according to the custom here prevailing. This fence has but one great advantage, which is, the ease and quickness of erection. This is a great object on new clearings, where the other labor necessary absorbs the whole time of the farmer; and the materials being on the ground, cost but little money.

Post and rail-fence is coming very much into fashion, and is certainly much superior to any other lumber fence in appearance, durability and effectiveness. The best quality of rails for this fence is made from chestnut timber of 8 or ten years growth, split in two rails, costing with us $4 per hundred, and posts $8. Some farmers employ part of the winter months in the preparation of materials under shelter, where they can proceed during all weathers toward the erection of a fence, which occupies the least possible quantity of soil—is an effective barrier to stock of all kinds, and presents a neat and sightly appearance to the eye, whether the useful or ornamental be considered. It costs but little more than the worm-fence, if thus prepared when the farmer has abundant leisure, and labor is plenty and low. But the usual contract prices are taken as the basis of the following calculation. Two panels would require ten rails and two posts, making 1¼ rods of fence. We have then as follows:—

10 rails, at 4 cents,	40	
2 posts, 8	16	
cartage,	25	
setting	32	$1,13.

This sum, less one fourth, gives 85 cents per rod nearly. Now can it be supposed that any farmer would be guilty of renewing the old Virginia fence, for the trifling difference between the two? This last is the cheapest after all. It does not stand in need of those constant repairs and resettings of the former, which are no small tax upon every farm where they are found. The stakes rot off, are loosened by the frost, and the fence falls down here and there, slides off the stones on which it is set, and is one of those vexations which are only borne, because considered one of the "necessary evils." Board fences for field enclosures are very rare with us, although, from the adjacent lumber regions of Pennsylvania, a fence could be erected costing less at first, but also less substantial than those already considered.

But, with the farmers of northern New Jersey, at least, the stone-wall should stand pre-eminent; whether they look at the first cost, durability, or repairs, or as answering all the purposes of a good fence. It is, like the post and rail-fence, an effectual barrier against stock of all kinds, although some plead an exception for sheep. But who ever saw a sheep go over a five-foot stone wall, not already vitiated by bad fences? It is above their "line of vision." They can see nothing on the other side, to induce an attempt. Where a farmer is gathering the stones off his land, he should consider nothing but laying up, as the expense of enclosing his field. This can be done, and is done for 50 cents per rod, every item included. Some contractors draw the stone, and put up the wall for $1 per rod, the farmer finding a team and boarding the laborers. Yet farmers seem greatly to neglect this kind of fence, even after the stones are gathered round the field. Nothing is more common than to see a field encircled with stones sufficient for a good fence, (and oftentimes for two,) with an unsightly worm-fence mounted thereon, a new rail stuck in here and there, propped up in one place and "bushed" in another, with a hedge on each side, and the whole occupying one third as many acres as the field enclosed contains. A less disagreeable but very poor combination of the stone and post-fence is sometimes made. A deficiency of stones is the excuse, and it is said to be the best use of what they have. But would it not be better to take all the stones, for a complete stone-wall as far as they go, and enclose the remainder with posts and rails. Some think it an advantage to stone-wall, to be very wide at the bottom. This is a mistake. When it is more than 2½ or 3 feet wide, the frost acts very unequally, and causes the sides to settle more than the middle. A separation takes place, and the sides bulge out and fall down.* Where it is less than 3 feet, the whole settles equally, deeper every year, till out of the reach of the frost's action, and thus a natural trench is formed. This is sometimes done at first with pick and shovel, but its importance has been greatly overrated where the wall is rightly constructed. A. R. D.

Hackett's Town, N. J., Jan., 1844.

THE COW-PEA—PEACH—CUBA-TOBACCO, &c.

The Cow-Pea as a Fertilizer, its Culture and value for Fodder.—I am convinced, from the limited experiments I have as yet had it in my power to make, that the cow-pea is one of the very best, and certainly the cheapest fertilizer that we can employ in the south. By some it is looked upon as an exhausting crop, nor is it to be wondered at that it should be so. Land that is tolerably poor is of preference selected, as there the pea goes less to vine, and *pods* more abundantly; and just before frost, the entire plant, root and all, is pulled up and cured for fodder! I was forced to do this once, but will not try it again. Even then, however, the land was somewhat improved, as the leaves had all dropped before I felt forced to *skin* so deeply, by the prospect of being short of fodder, and the ground was so effectually shaded all summer.

I will now suggest some experiments, which, if I live another year or two, I shall try. I am unfortunately situated like too many of my brother planters, and have little leisure for anything but cotton-making. Where a planter aims at producing, to as great a certainty as possible, as much cotton as his hands can pick, up to Christmas day, he has no time for other occupation. If we could be satisfied with as much as could be saved before the 1st December, something could be done in the way of improvement. The making of sufficient manure for a large plantation, and hauling it out when made, seem heavy tasks, and they are so. Yet it would certainly be just as easy to make and apply three times as much manure on a plantation working thirty hands, with of course teams in proportion, as on one of ten hands. The waste of valuable manure on plantations is very great, and it will be many years before much improvement is effected.

I propose to select ten acres of poor land, which I will have well plowed, and as early as 1st to 15th March planted in cow-peas sufficiently close to give a good and early covering to the ground. Peas planted early produce more *vine* and fewer *seed* than when planted late. So soon as they begin to blossom freely, I shall have them turned completely under, and another crop of peas immediately planted. The second crop I intend shall stand to ripen, when I will turn *hogs* upon them, but no cattle, so that the leaves and vines will be almost all returned to the soil. One half of the lot I will have turned over deeply in the fall, the other half in the spring, planting one half of each five acres in cotton, and the other half in corn. It was my intention to experiment in this way this season, but circumstances render it impossible to any extent. That such a course will do more for our land here than the turning under of a crop of clover will in the north, is obvious. The quantity of vegetable matter on the ground, other things being equal, is vastly greater—I should say some three fold; the roots are few, one long tap-root only, with a few slight fibres; the vines and leaves large and extremely succulent, completely shading and protecting the soil from the sun; and the plant is of but a very few weeks growth. The cow-pea requires little or no culture, which is in favor of its value for this purpose—a bull-tongue plow run along each side of the row will suffice, though even this may be dispensed with. I would not wish to have it thought that I am advancing what I suppose to be a new idea, in advocating the value of this plant for this purpose. It has already been *discussed* in all its bearings, but has been *but little tried.* My object is to induce a few such trials as that I have proposed. If our agricultural societies would give prizes for the best conducted and most successful experiments of the kind, they would do infinitely more good than by the course they at present pursue.

As a fodder-making crop, the cow-pea is invaluable. It is, like clover, difficult to save, but when saved, of greater value. This I have tested. I had a plan for gathering and saving pea-fodder, suggested to me the other day, that is well-suited to the cotton plantation, and which I shall practise when the vines are sufficiently matured, and plentifully covered with their long, well-filled pods; namely, run a heavy, iron-toothed, two-horse harrow over them, and as the harrow becomes loaded with vines, lift it up and pass on. By this means, the vines are rapidly gathered into piles, with a little dirt perhaps among them, which will shake out in curing. They are then put up in rail pens in the usual way. You must bear in mind, when you see such a mode recommended for harvesting a crop, that to *cradle* the cow-pea is impossible; to cut them with scythe or sickle, a slow, troublesome business; and that the most convenient and common practice is to pull them up, root and all, by hand. Their growth resembles that of none of your northern peas; but is rather that of a gigantic clover, with vines of *any length* under say 8 to 15 feet. The pods are very numerous, generally in pairs, and contain each some 15 to 25 peas, which afford most excellent and nutritious food for man and beast. One of the most extensive and experienced planters in the adjoining county of Jefferson, killed upward of 700 head of hogs for the supply of his own family, (and had not enough then,) which were fattened *entirely* in the pea-fields.

---

* Note.—We think if long stones are laid across the whole width of the wall, at every other course in laying it up, that it would settle as evenly as a narrow wall, for we have occasionally seen those thus constructed, which have already stood well from 40 to 50 years, and are likely to remain as much longer without bulging.—Ed.

Peach and Fig Orchard.—I have just completed the planting of a small peach and fig orchard here, embracing 350 trees of the former, and 50 of the latter; and three hands, besides what assistance I gave myself, have been busily occupied three days in doing it; two more following up and giving each tree a couple of buckets of water. I would certainly prefer that they had been planted last fall, but it rained so incessantly, that it was impracticable. The peach-trees are one year's growth from the kernel, and will be budded where they stand this summer. I would rather have had the kernel dropped where the trees now stand; but that, too, was impracticable. I shall cultivate the ground this season in Irish potatoes and early corn, both followed by peas and sweet-potatoes; some of it will be in pindars, and some poor spots in peas, *to be turned under green*, followed by peas again, turned under. Each tree shall receive during the summer, a good barrowful of pure marl, placed immediately around it.

The Yellows.—From what I see in various papers, the disease called yellows is rapidly spreading among the peach-trees all around you. Opinions as to its nature and origin seem various enough, but I see no plausible method of cure or prevention. From what I have seen of it, I have no doubt of its being a disease *sui generis*, and if occasioned by an insect, certainly not by the *Ægeria Exitiosa*. So far as I can learn, the yellows is altogether or nearly unknown here, while the egeria is sufficiently troublesome. The peach-tree dies, with us, only of old age and neglect. Such *extravagant* crops I have never seen anywhere—so heavy that the trees are seriously injured thereby. This is the worst kind of neglect. The fruit, when so very numerous, should be thinned out when as large as pigeon's eggs, both to improve the quality and to favor the tree. You will will find a short article on "the causes of decay in peach-trees, and their prevention," in a little almanac I prepared in 1842, which contains the results of my experience and observation on this subject.*

Some one suggested at a recent meeting of your excellent New York Farmer's Club, that young trees produced from Mexican peach-stones, were free from yellows. I have no doubt that those from this part of the country would be equally so; and if it would be any object to some of your friends, sufferers from this disease, (and subscribers to at least two agricultural papers—you know my rule!) to try whether or no, I should take pleasure in saving some pits for them this summer, as we have so far this season, the prospect of a full crop of every kind of fruit, which, however, *might be* blasted by a late frost. Peach, plum, pear, and fig-trees are all in full bloom, and have been for two weeks past. It is rare, indeed, that our peach-trees *repudiate the debt* they owe the careful cultivator; so that even your fastidious New Yorkers need not mistrust them, though they do come from Mississippi!

Cuba-Tobacco.—I wish to express my thanks, as one much interested in the introduction of additional staple crops to the south, to the author of that article on the culture and curing, &c., of Cuba-tobacco, copied in the last volume of the Agriculturist, page 313. I hope that it will be the means of inducing a fair trial to be made, of its value as a crop. There are always upon plantations of any size, several hands, who could be much more profitably employed at in-door work, such as cigar-making, during inclement weather, and indeed during all the year, unless in cotton-picking time. It is undoubtedly for the interest of the cotton-planter to use every means in his power to find profitable employment for as many hands as possible out of the cotton crop, so as to lessen the production of that staple. There ought to be an annual convention of cotton-planters held in New Orleans, to discuss and devise means for advancing and sustaining their interests as a body. But I fear I shall not live to see that day, when any such measures will be carried out. But to return to our subject. I have now three small parcels of Cuba tobacco-seed in the ground, superior imported seed, and I intend following implicitly the course laid down in that article. You shall hear the result.

Migration of Birds.—They must have had a moderate, open winter north, and northwest of us, to what they had during that of '42 and '43, if we may judge from the movements or migration of the birds, a subject which is deserving of more notice from farmers, and of record in farming papers than it receives. During the winter preceding this, the open commons, pastures, and cotton-fields, were frequented, for several weeks, by large flocks of a plover, which I am inclined to think is the golden-plover, (*charadrius pluvialis* of Wilson,) though differing slightly in its markings and size. They afford capital eating, as I proved to the extent of sundry dozens. The same birds are to be found in vast numbers on the prairies of Illinois, during an open winter or early spring, and I presume were driven thus far south by the severity of that season there. The robin (*T. Migratorius*) and the cedar-bird (*Ampelis Americana*) were also unusually numerous. This past winter, neither robins nor plovers have been seen, and but very few cedar-birds. The sand-hill crane is also but poorly represented this season.

The Season.—I was told, last week, that one of the most experienced overseers in Concordia parish, opposite us here, had finished planting upward of 300 acres of cotton. This is unusually early—three weeks too early, at least. Certainly the weather for the last four weeks has been very tempting—would rate as a pretty full average sample of your summer assortment! I have in two thirds of my corn crop, and am nearly ready for my cotton-planting; and, from what I can learn, I am fully up with my neighbors. THOMAS AFFLECK.

Ingleside, Adams Co., Miss., March 5, 1844.

---

* NOTE.—From the date of this letter our readers will see, that Mr. Affleck, when he wrote, could not have yet seen the able article on the Peach-Tree, by S. S., which appeared in our February and March numbers for this volume. In that, the *yellows* is attributed to the aphides or plant-lice.—ED.

LONG-WOOL SHEEP.

MY attention has been drawn to an article in your journal, Vol. II., page 209, entitled "The Best Sheep Country," in which the writer asks the following questions:—

1. Will the quality of wool obtained from a Cotswold or New Leicester sheep compensate for its reduced price?

2. What would be the cost of importing from England, via. New Orleans, into this territory, South Down, Cotswold, or New Leicester sheep, and what is the price of such sheep in England?

Having had experience of some 20 years in breeding the different kinds of long-woolled English mutton-sheep, I purpose to answer the above questions as briefly as possible. As facts are ever to be preferred to supposition, I can not more satisfactorily answer said questions, than by reciting such facts as have occurred to me in my own experience as a breeder, which may apply to the case in hand, and by which the reader may ascertain the comparative value of the mutton, with the smaller and finer-woolled sheep.

In the commencement of my sheep-growing, I turned most of my lambs (which were a cross from full-blood, long-woolled bucks, on the common sheep of our country) to the butcher, at the age of from 3 to 5 months old, at prices varying from $2,50 to $3,50 per head. The ewes from which I bred were well-selected, and cost from $2,00 to $2,50 per head, and I almost invariably fatted them the same year, and replaced them by a new flock. In this way I was enabled to make a fair profit on the ewes, the lambs, and the wool. The lambs I replaced with an equal number of wethers, which I stall-fed the following winter. These last cost me per head about what my lambs brought, and generally paid 50 per cent. on the first cost, and sometimes more. This method I pursued until about 10 years since, when I found that the general introduction of the Saxon sheep, with their crosses on the Merino and native breeds, had so depreciated the size and constitution of our sheep, that it became quite impossible (as it now is) to obtain from this stock, ewes fit to breed market lambs and wethers, of the quality requisite to be fed for the shambles. Such being the case, a new system of sheep-husbandry was to be adopted, and I soon resolved upon a course which I have since pursued, and that was to raise wethers for the market, and to keep a good and well-assorted flock from which to supply those who wished to purchase. To do this I knew required a large outlay both of money and trouble, to say nothing of the risk ever attending a new enterprise.

And here, Mr. Editor, allow me to suggest, that I think that our American farmers, too generally, are unwilling to incur much expense for the advancement of that art which they have adopted as their study through life. They are all willing to have good stock on their farms, but not at the expense of any extra outlay. They are willing to profit by a neighbor's enterprise, and to lend their *encouragement* just so far as it does not cost anything. This is all wrong. There should be the same community of interest existing among, and the same mutual encouragement extended from the farmers to one another, as between the merchants and manufacturers, who are proverbial for contributing to the advancement of their own peculiar callings.

But to return. At the time spoken of, the Bakewell sheep were most in vogue, and for a buck of that breed I had paid as high as $60. This blood did not suit me; the constitution of these sheep not being sufficiently strong for our cold winters. I therefore resolved to make an importation on my own account, which I did in the year 1835, consisting of two pairs of sheep, one Cotswold and the other Lincolnshire. Their cost in England was $25 per head, and about the same was paid for cost of transportation to New York. The first lot of wethers produced from these bucks, I sold the winter of 1839 in New York market for a little over $31 per head, and the next year, in a falling market, I sold a second lot for $20 per head. In the year 1836, I purchased in New York one buck and sixteen ewes, being, with the exception of about three pairs of sheep, the whole of an importation, made by an English gentleman, direct from the county of Lincolnshire, England. What they cost in England I know not, but the pairs that were sold out of the importation brought from $300 to $400 per pair, and I gave over $800 for the 17 sheep, which I consider one of the best purchases I ever made.

In the year 1840, at the Fair in New York, I purchased a buck and ewe, (Lincolnshire,) just imported, for $200, and at the present moment, I have a friend who has engaged to bring me the best pair of sheep ever imported into the United States. I hope he may do so. Thus it will be perceived that I have made large outlays in order to improve my flock, and I take just pride in saying, that thus far I have been amply repaid for my pains. I raise sheep both for the farmer and for the butcher.

During the last two or three years, the agricultural interest has been greatly depressed, yet I have realized from my wethers, from $8 to $10 per head. I have sold within the last few years a large number of both bucks and ewes for breeding, at prices varying from $25 to $50 per head for the former, and from $10 to $25 per head for the latter; and in some instances for a very fine specimen, I have obtained $200 per pair. During the twelve months just passed, blood stock has brought but a meagre price, and buyers have been scarce at that. Now, however, the prospect is better, and inquiries are made from various quarters, for fine sheep particularly. There are plenty of good sheep and fine cattle bred in our own country, equal if not superior to anything that can be imported, and which can be furnished to the purchaser at rates much less than it will cost to bring them from England—and it is but demanding justice to ask, that our own breeders and producers should be encouraged, in preference to those of foreign countries, when the article furnished is equally good in the one case as in the other. Thus far I have spoken more particularly of the mutton-qualities of the long-woolled sheep. I will now refer more particularly to the wool itself.

Is is a well-known fact, that the coarser wools are higher in proportion and in better demand than the fine. In our market, wool has to be of the very finest quality to command an extra price. Fair, and middling fine wool, and long wool bring about the same price—mixed lots go at one price. A Saxon sheep will average from 2 to 2½ lbs; a long-woolled sheep from 6 to 8 lbs. The former now brings 50 cents per lb., the latter 30 cents. The difference, it will be seen, is in favor of the latter.

Permit me here to introduce a paragraph taken from a letter written by one of my manufacturing correspondents of Boston. "I am glad to learn that the attention of those engaged in sheep-husbandry is now turning toward long-woolled sheep. They are now valuable not only for their superior mutton, but for the character and value of their wool. This arises from the fact that we of the northern states are commencing the manufacturing of mouslin-de-laines, and other fabrics, which require the long wool."

In a late number of the Pennsylvania Inquirer and National Gazette, I perceive that great man, Daniel Webster, whose name should be dear to every American farmer and manufacturer, has spoken to the like effect. "He begins to think that the time is approaching when long wool will be in great demand for the use of American manufacturing establishments, and that if he were a young farmer he would have some *Lincolnshire* sheep that would produce him anually 15 lbs. of wool." In conclusion, allow me to say for the benefit of your western correspondent, that I think the western country is well adapted to the cultivation of sheep, owing to the uniformly mild winters in those districts, and to the abundant supply of grass upon the extended prairies. Besides this, the long-woolled sheep are proverbially tame and domestic, and hence are easily guarded and kept. Many fine sheep have already gone to that country, and among the number, 15 bucks and two ewes from my own flock, which I sold to an enterprising merchant of New York, who sent them to his farm on or near Rock River in Illinois.

In that country wool is very valuable, and will continue to be so no doubt for years to come, for the reason that there is a constant and large domestic consumption. If the mutton can not be sold, it can be melted for the tallow. A well-fatted, full-grown Cotswold or Lincolnshire sheep will produce from 50 to 100 lbs. of tallow. This can be sold in the same way as lard. Thus I have answered, though not in order, the inquiries of your correspondent, and I trust that what I have said may be satisfactory to him.

LEONARD D. CLIFT.

Carmel, March 1, 1844.

FATTING STEERS.

AT your request I send the following account of the five steers kept over winter. I bought them in October last, at $22,50 per head, pastured them a short time, and took them up 2d November, keeping them in the barn in stalls all winter, excepting a short time morning and afternoon, when they were turned into the yard to water and have their beds made. From 2d November to 2d December, they were fed twice a day, each time on a bundle of cut corn-blades, ½ bushel beets (mangol-wurtzel or sugar-beet,) and ¼ bushel corn and cob-meal ground together; this mess mixed up and divided among the five. In the place of hay, I gave them each a bundle of corn-blades, cut in half with a broad-axe, and fed morning and evening. They had access to salt from a box in the barn-yard, besides some little mixed in their feed. From 2d December to 23d January, I gave them ½ bushel meal, 2 bundles of cut-blades, and 1 bushel beets, mixed and fed twice a day as before. This mess was put on at night in a large boiler and cooked, taken out and fed in the morning, when a similar mess was put on for the evening feed. Corn-blades cut with a broad-axe and fed as before as a substitute for hay. After the cattle had eaten off the leaves from the stalks they were passed through the cutting-machine (Briggs' patent) and thrown into the barn-yard. The cattle were carded every morning.

From 23d January to 4th March, (on which day I sold them at $33 per head,) they were fed three times per day; feed cooked each time, and consisted of ¾ bushel of meal, 2 bundles corn-blades, 1 bushel beets, and the intervening time, with about 8 lbs. per day of coarse clover hay each. I should have done better with the steers, had not one of them been quite sick the early part of the winter, injuring the sale of the others. The meal given these cattle would have sold for about $36, the hay for about $8, making $44; which gives exexpense per head about $9. This does not include the beets. My stock of cattle this winter has been 10 head, (one a calf,) and I have now in the yard about 170 large loads of good manure; for all my corn-blades are cut fine before going into the barn-yard. From the fall of '42, to November '43, I made about 300 loads of manure. I advocate every farmer making his own manure. The cattle were soiled all summer. This statement I believe correct, as I have kept a regular account of the feed, and if my experiment be of any benefit to the farming community I shall be glad.

JNO. M. C. VALK.

Carolina Hall, Flushing, L, I., March 7, 1844.

ELDER-BERRY WINE.

TO EVERY quart of berries, put 2 quarts of water; boil half an hour, then run the liquor and break the fruit through a hair-sieve. To every gallon of this juice add 3 lbs. coarse brown-sugar, and ¼ lb. each of ginger, cloves, cinnamon, and Jamaica-pepper, and boil the whole a quarter of an hour. Now pour the liquor into a tub, and when of a proper warmth, add a large crust of toasted bread well saturated in yeast, and let it work till the next day; then put it into a keg and work till it ceases to hiss; after which, add 1 quart brandy to every 8 gallons of liquor, and stop up the cask.

MRS. S.

Albany, March, 1844.

STATISTICS OF FRUIT.

As there seems to be at this time a general awakening on the subject of fruits, their culture, &c., all statistics on that subject will probably have an interest for your readers, and I therefore append the following calculation of the value of fruit, *per individual*, raised in each state. The data upon which this is based, is Mr. Ellsworth's Report of Population and Production for 1840. Leaving out fractions, the calculation stands thus:—

	Per person.		Per person.
New Jersey,.......	$1,24	Rhode Island,......	$0,26
Connecticut,.......	96	Missouri,..........	24
New Hampshire,...	84	Georgia,...........	23
Vermont,..........	73	Maryland,.........	22
New York,........	70	Indiana,...........	16
Virginia...........	57	Arkansas,.........:.	12
Kentucky,.........	56	S. Carolina,........	09
Massachusetts,.....	53	Alabama,..........	09
N. Carolina,.......	51	Michigan,..........	08
Tennessee,.........	44	Dist. Columbia,.....	08
Pennsylania,.......	36	Mississippi,........	04
Delaware,..........	36	Louisiana,.........	03
Ohio,...............	31	Florida,...........	02
Maine,............	29	Wiskonsan and Iowa	
Illinois,...........	27	each one tenth of 1 ct.	

Average in all the states, 45 cents each person.

It might be a curious subject for investigation, for some one fond of such inquiries, to see if some connexions could not be traced between the quantity of fruit raised in each state, and its general healthfulness. That good fruit is a great promoter of health there is now no question; the respected opinions of our grand-parents to the contrary notwithstanding. It would seem, from present indications, the day is not far distant when we shall have a much more bountiful supply of fine fruits than at present, and as a consequence, *purer blood* and less *feverish brains!*

In evidence of this increasing interest, on inquiring the other day at one of your large agricultural warehouses for a tree-scraper, I was informed that an instrument for the purpose was formerly made at the eastward, but its manufacture had been discontinued, for the best of all reasons, the want of demand; but that there had been more inquiries for the article within the last year, than in all the ten years previously. A ship-scraper, with one of the points rounded on the grindstone, so as the better to get into the crotches of the tree, answers every purpose.

S. C. Higginson.

Newburgh, April 2d, 1844.

NORTHERN CALENDAR FOR JUNE.

In the north, this is the most active month for vegetation of the whole year. It becomes the farmer, therefore, to be stirring with the lark, and watch attentively the whole circle of his fields. Nothing should be neglected. The potatoes designed for winter should now be planted; ruta bagas sown, and if any vacancies occur in the sugar-beet and mangol-wurzel beds, they should be filled up by transplanting. The ruta-baga is one of the most important crops of Great Britain, but though a useful one in this country, the uncertainty of it compared with many others, and its far inferior value to Indian corn, to which our climate and soil is perfectly adapted, render it but of secondary consequence. By many who have tried each, the sugar-beet is much preferred for feeding stock; and it is certain the latter will keep longest without injury; and in most parts of the country it is a much surer crop, suffering less from drought, and vastly less from insects. Davy, who analysed them, gives for ruta-bagas, only 64 parts in 1,000 as nutritive matter, while he found 136 in mangol-wurzel, and 146¾ in 1,000 in the sugar-beet. Where an early crop is taken off the land, ruta-bagas, and even the common white turnep, may be raised to advantage, as they may be sown after any other crop, and still have time to insure a good growth. Ground bones are a most excellent manure for every variety of turnep, as is also lime. The last may be used to great advantage with almost all crops and soils, when not already found in them in abundance. The plow, harrow, cultivator, and hoe, ought to be plied constantly, the surface kept finely pulverized, and all weeds exterminated. It will frequently save a vast deal of labor to the farmer, to go through his fields of wheat, oats, and barley, and pull up all the noxious intruders, chess, cockle, charlock, red-root, &c. The garden requires particular attention during this month. *Keep the weeds out and the useful vegetables in.* As soon as the early radishes, lettuce, &c., are taken off, supply their places with cabbage-plants, turneps, late beans, and peas. Leave no nook or corner unoccupied, and remember that it will require fifty times the labor to extirpate the progeny the following year, that is necessary for extirpating the weeds that are suffered to seed this. Weedy fields and hard sods intended for wheat in the fall ought to be plowed during this month, cross-plowed in July, and if necessary, again before sowing. Land intended for buckwheat, should be prepared, and though the old rule is to sow when the chestnut blossoms appear, it is a safer one, to get it in somewhat earlier, especially on lands subject to early frost. Sheep ought to be carefully looked at after shearing. Cold, drenching rains are peculiarly hurtful to them at such times. In 1842, large numbers, in the state of New York, were chilled to death in June. Unless they have dry, well-sheltered fields to run in, and are stout, well-fleshed, and hardy, they should be driven home, for the night at least, and provided with a little grain, beans, or roots. A supply of salt in troughs, where it is not liable to waste from rains, should at all times be within their reach. Always have tar at the bottom of the trough. This last precaution prevents worms in their heads, and has a general healthful effect. Some of the early grasses and clovers may be cut, and when put up, add salt to the extent required by the animal while feeding: animals like salt with their food, as well as man. Renew your fields of broad-cast or drilled-corn for soiling. Look well to your bees; many swarms will come out this month, and your hives must all be in readiness. Their preparation for swarming may be known by their clustering on the outside of the hive, and a peculiar piping noise from the new queen. Use some of the improved hives, so as to secure your share of the honey without endangering the lives of the bees. Watch the moths closely, and kill them as they are found; and when they have made their way into the hives, get at them there and exterminate them, as soon as possible.

Kitchen Garden.—The main point in this month, is to keep the garden entirely clear of weeds, as their growth will now be very luxuriant, and if thoroughly subdued, will be much more easily kept out the succeeding months. This is especially requisite with cucumbers and melons, around which keep the ground entirely clean and loose. Sweet-potatoes cultivate well, and draw the earth up about the roots. Cabbages for autumn and winter use, can be planted out, and celery plants be transferred into trenches. Peas may be sown for late crops, although they do not bear so abundantly as those sown earlier in the season. Sow lettuce, and transplant every week, in order to insure a regular succession through the season. This should be done in moist weather, or if in dry weather, late in the afternoon, accompanied with a plentiful watering. During the month sow kidney and other beans, for successive crops, and in the early part of the month, a few Lima beans may be planted for a late supply. Turneps for late crops may also be sown in this month.

Fruit-Garden and Orchard.—During this month apple and other fruit-trees can be trimmed. For this work, the present season is preferable to the winter, for the reason that the sap, being in full circulation, will exude, and covering the wound, heal it in a short time. On the contrary, in the winter, no sap can exude, and the branch will frequently be quite dead for some inches from the wound. All useless limbs and upright shoots cut away, and let the tree he trimmed to an open head. In plum-trees, all black knots, formed by the insect, must be taken off and burnt, or the disease will spread rapidly. Cherries will not bear much pruning, and it is generally best to allow them to grow naturally. Stone fruits frequently bear in such profusion, that the tree is unable to mature them all, and they are thus of comparatively small size. To remedy this, the cultivator should thin out the fruit by hand, leaving only a moderate crop; the nourishment of the tree being thus devoted to a limited quantity, will produce a larger and more delicious fruit. When trees are allowed to bear too abundantly, the great efforts made to mature all their fruit, will sometimes exhaust them to such a degree as to induce diseases, from which it will often take them several years to recover. During this month, insects will frequently attack fruit-trees in great numbers. For some of these, as the slugs and others of the same nature, a sprinkling of ashes or lime is the most immediately destructive. For the aphis and smaller insects of the same habits, a solution of whale-oil soap, applied with a syringe, is the most efficacious. Caterpillars can be destroyed while they are yet in small clusters, by means of burning sulphur.

Flower-Garden and Pleasure-Grounds.—Plant out in the borders perennial and autumnal herbaceous plants, which have been sown in seed-beds. This should be done near evening, and always accompanied with watering, unless the weather be moist or wet. Box-edging can still be trimmed during moist weather, as also hedges of privet, hawthorn, &c., although for these latter, earlier in the season would have been preferable. The turf in the pleasure-grounds and lawns keep well mowed; the oftener this is done, the more rich and velvety appearance it will assume. The gravel-walks and carriage-drives keep cleaned, and free from weeds and grass throughout the summer.

It is in this month that the numerous wild flowers of our fields and woods abound in the greatest beauty and luxuriance; many of these are exceedingly beautiful, and well worthy of cultivation in the private garden. The lobelia-cardinalis, which abounds in the swamps, is one of the most splendid of these, and with many others has been transferred to our own garden with entire success. To insure their living, a portion of the natural soil should be transplanted with the roots, and a moist day, or late in the afternoon, selected for the purpose. Apply frequent watering for some days after. There are few who have not admired these gems, which so thickly cover nature's carpet; and when they can be so easily transferred to the parterre, neither the botanist nor amateur should be willing to deprive himself of so cheaply-purchased a pleasure. In case of drought it would be advisable to make frequent use of water in the flower-borders, and also in the strawberry-beds, by which this fruit will be enabled more fully to develop itself, and the plants produce a more abundant crop.

SOUTHERN CALENDAR FOR JUNE.

Warm weather will now have commenced in earnest, and it is "*a merciful man who is merciful to his beast.*" Call all hands at noon, and after having fed and curried all the working animals, let them be allowed to rest until three o'clock; for they can do as much work in the remainder of the day, as though they were at work the whole time.

By the first of this month the cultivation of a greater portion of the plant and rattoon-cane will have been completed. Continue to plow among the cane in old land until July, but not too deep, for there wil be danger of hurting the roots.

Keep cotton and tobacco clean—stirring the earth often; this not only keeps the weeds down but greatly assists it in *resisting drought*. The cotton will require the hoes to be passing through, so as to clear away grass and weeds left by the plow. Draw earth lightly around the plant, but leave no ridges as thrown by the plow; for there will be less surface exposed to the sun's rays.

Early corn will be forward enough to give the last plowing, which should be just before the time that the tassel makes its appearance. Plant peas between the corn as directed last month.

The grain-crop not yet harvested now claims attention. After oats are cut and stacked, it would be a great benefit to the field and stock, to plow in all stubble and sow down with peas, at the rate of a half bushel to an acre and even more.

The first planting of sweet-potatoes will now require the last working. Lay the vines on the ridges, and start the shovel-plows to run three or more furrows between them. Draw the earth with hoes to the top of the ridges, and be careful the ends of the vine are not covered. Continue to plant out drawings on the vine all this month, whenever the weather is suitable. The vines make the best seed, and may be planted as follows: Cut them about a foot long; have a hole made in the ridge with a dibble; then, either with a stick with a notch cut in one end, or with the finger, thrust down a vine or two doubled; press the earth well around, leaving an inch or two out of the earth. For a winter's use of fresh potatoes, procure the long red variety, and plant in rich low ground. They are great yielders, and ripen fully in a southern climate, and consequently prove a much better variety than at the north. They will make a good crop if planted by the middle of this month.

Clip hops for drying, and evergreens if they are much grown, but not otherwise, as the heat will be liable to dry them too much. Begin to sow carrots in drills, to facilitate the weeding of them. Sow endive for fall crop, and black runner beans. Soon after sowing, water and shade the drills if necessary, until they have come up and are strong enough to bear the heat of the sun.

See Northern Calendar for July and August.

FOREIGN AGRICULTURAL NEWS.

By the arrival of the steamship Britannia, we are in receipt of our European journals to the 4th of May.

Markets.—*Ashes* have fallen a trifle and are dull of sale. *Cotton.* The downward tendency of this article seems to have been checked, and the sales were extensive with a firmer feeling. The stock on hand at Liverpool on the 1st of May, was 656,000 bales, against 780,000 at the same period last season. *Flour* was quite depressed, but it was thought prices had reached their lowest notch. *Cheese*, there is so small a stock on hand, that prices are merely nominal. *Beef* has improved a shade, a large stock on hand. *Pork*, without change. *Hams*, dull. *Lard*, in moderate request. *Lard-Oil*, none on hand, prices therefore nominal—it would sell well now if in market. *Tallow*, firm, *Rice*, steady. *Tar*, the same. *Turpentine*, on the advance. *Tobacco* is increasing in demand, and prices firmer.

Money continues abundant as ever.

American Stocks, scarce any transactions—prices merely nominal.

Business generally good and on the increase.

The Weather had been very mild through April, and prospect of a good harvest not only in England but on the continent.

The Duty on Vinegar is abolished, and we should suppose now that it could be exported at a profit.

The Duty on Wool is also taken off, thus giving us a chance in the British market, as soon as we can grow wool cheap enough for exportation; which we think will ere long be done on our broad prairies.

The following summary is made up principally from the Edinburgh Quar. Jour. of Ag., Royal Ag. Jour., Far. Mag., New Far. Jour., British Far. Mag., Far. Herald, Lindley's Gar. Chron., and Veterinarian.

Importations of Cheese.—During the year ending January 5th, 179,389 cwt. of cheese were imported into Great Britain, of which 48,312 cwt. were from the United States.

Durham Bulls in France.—Nine of these fine animals have been sold at the Veterinary school of Alford, the highest price paid was 3000*f.* ($600.)

Large Cow.—A cow was lately killed in Durham, whose gross weight was 2,156 lbs.

Three Calves.—A cow at Stoke Prior, recently dropped three calves at one birth; one black, another red, and the third grizzle. They are all alive and doing well.

Incendiarism.—It is painful to notice that there is no cessation among the peasantry, in firing the stacks of wheat and other grain in different parts of England.

Death by a Boar.—A Mr. Fisher was recently killed at Upton, by having his thigh badly bitten by a boar. It is supposed the enraged animal cut the femoral artery with his tusks, as Mr. F. bled to death in a few minutes.

Agricultural Colleges.—We see that it is contemplated establishing several of these institutions, in different parts of Great Britain.

Ripe Peaches were produced at Eatington Park, Warwickshire, on the 7th of April. Mr. Hutchinson, the gardener, thinks he shall be able to produce them another year in March. He grew them in the pinery, from a border 6 feet wide and 18 inches deep, filled up with pasture-loam of medium strength, put in as rough as possible. He says, to make peach-borders wide and deep, and to fill up with rich manures, is a waste of money. He much prefers syringing to smoking to keep his trees clean.

African Guano.—The best of this comes from the island of Ichaboe.

Syrian Fruits.—John Barker, Esq., lately H. M.'s consul at Aleppo, after a residence of more than 40 years in the east, has returned to this country with trees of many new and valuable fruits. Among them are several peaches, nectarines, and apricots with sweet kernels. These, when grown in Syria side by side with the finest of the varieties known in Europe, are said to have proved as superior to the latter as they are to the worst sorts of which we have any knowledge. Mr. Barker also possesses a white-mulberry from Armenia, so sweet that its fruit is dried like raisins, and so juicy that when pressed it produces the syrup in which the delicious butter of Armenia is brought to Aleppo. We shall watch with great interest the period when these fruit-trees yield their first crop in this country.

Bees.—A hive which was opened by Swammerdam, was found to contain one queen bee, 33 males or drones, 5,635 working-bees, 45 eggs, and 150 worms. Total population, 5,864; for whose accommodation there were 3,392 wax cells for the use of the working-bees, 62 cells containing bees' bread, and 236 cells in which honey had been deposited; in all 3,620 cells. From this observation it may be presumed the hives contain from 5,000 to 6,000 inhabitants, among which there is only one female, viz., the queen bee, and from 3,000 to 4,000 cells.

Glass Milk-Pans.—Milk set in these produces a better quality of butter than any other. Those used are made of the common green bottle-glass.

To Preserve Turneps from the Fly.—A day or two before sowing, put the seed into a sieve and tub of clean water, and rub it quite clean through the sieve, changing the water once or twice; dry it in the sun under a wall or glass, or before a fire. A little flour of brimstone may be mixed with the seed while still damp. If the egg of the turnep-flea is committed to the soil with the seed, this is an effectual preventive.

Tussac-Grass.—All the seed of this valuable grass sent to England from the Falkland Islands, has failed to vegetate, and in consequence of this it is contemplated importing tufts of the grass with roots for propagation.

Destruction of Insects.—Mr. Read of Regent Circus, Piccadilly, had leave given him to submit to the inspection of the council his garden-syringes for throwing currents of aqueous vapor or narcotic fumes over the surfaces of trees and plants infested with noxious insects, without the slightest injury to their bloom or foliage. By an ingenious arrangement of the nozzles of the syringes, the currents could be directed to any given point without inconvenience to the operator; and water being introduced into the syringe in its liquid state, passed out through the nozzle as vapor or mist, settling on the plants as the gentle dew.

Sources of Ammonia.—According to Dr. Ure, in the year 1838 the quantity of coal distilled in London alone amounted to 180,000 tons, containing at 1 per cent. 4, 032,000 lbs. of nitrogen, equivalent to 4,896,000 lbs. of ammonia!—the produce of a single city in one year.

Again, it is a supposition, certainly within the mark, that every person, one with another, gives rise to 1 lb. of urine every day, containing, according to the estimate of Berzelius, about 210 grains of urea. Taking the present population of London at two millions, this gives 60,000 lbs. of urea *daily*, or 21,900,000 lbs. yearly of this valuable substance thrown away—a quantity capable of producing by its decomposition 12,410,000 lbs. of ammonia. Could one fourth of this ammonia be converted into flour, it would produce the astonishing quantity of 159,687,500 lbs.

Special Manures.—Mr. Fleming of Barrochan (a Scottish farmer) gives the following as the results of his steward's experiments on special manures. He found that the nitrate of soda and potash, when applied by themselves, or in mixture, are beneficial to potatoes and hay; but when applied to grain crops, especially singly, they are positively injurious in a moist climate, as, though the growth of straw is greatly increased by them, the sample of grain becomes lighter and otherwise deteriorated. He considers it probable that the silicate of potash would counteract this effect. Common salt, at a distance from the sea, is advantageous to grain crops as respects color and plumpness, and also to grass and hay, although it does not cause a rush of growth like the nitrates. Soot differs little from nitrates in its effects on grass intended for hay, but the dealer in hay gives a less price for hay raised by soot. Sulphate and muriate of ammonia have the same effect as the nitrates. Sulphate of soda and magnesia act differently, and will not pay in most cases when applied by themselves to potatoes or grain, but they do well when mixed with nitrates. Guano may be successfully applied to every species of crop in the field or garden, and it always proves a most powerful auxiliary to farm-yard dung.

Analysis of Soils.—The following is a method of analysing soils, for ordinary agricultural purposes: Weigh a sufficient quantity of the earth to be analysed, say 1000 grains dried in the open air: dry the same before a fire on paper so as not to scorch the paper; re-weigh, and the difference will be the moisture. Roast the residue; re-weigh, and the difference will be the organic matter. Pour a convenient quantity of muriatic acid on the remainder, when stirred and settled pour it off, and add oxalate of ammonia; the precipitate will be the lime. Mix the remainder with water, and stir it well; when a little settled, pour off the turbid mixture, and the suspended contents are argillaceous, and the deposite siliceous.

Remarkable Fecundity of a Ewe.—A valuable ewe, the property of Mr. Edward Rowle of Cumberworth, near Alford, yeaned on the 7th inst., in less than half an hour, the extraordinary number of five lambs, averaging in weight 5½ lbs. each. The whole of the lambs, with the ewe, are stout and healthy.

British Guano.—British Guano is now being gathered from the Flamborough cliffs, in Yorkshire.

New Work on the Vine.—We learn with much pleasure that a descriptive account of an improved method of planting and managing the roots of grape-vines is about to be published by Mr. Clement Hoare, whose valuable work on the general management of vines in the open air is so well known. We understand that the author's intention is to make known a new method of planting and managing vines, so as to give the gardener as perfect a command of the roots as he now has of the branches.

Culture of Wheat in China.—Wheat is cultivated nearly throughout the whole of China; hence the difference in the time of planting, and its coming to maturity. In the southern provinces it is sown in November, as soon as the rice crops or vegetables have been cleared away; and in the northern it is planted toward the end of October. In the former the harvest commences in April, and in the latter in May; in the Shantong and Chensi provinces it is not finished before the end of July; so that it requires above half a year to come to maturity. It is cultivated on almost every kind of soil, and on the slopes of the mountains, which are cut into terraces for the purpose. In the neighborhood of Amoy (lat. 24° 25′) it is planted in the marshy grounds from which the rice crop has been removed; and the mean temperature of the months of January and February, 1843 (which were very wet) was about 56° of Fahrenheit. The coast about Amoy is extremely barren and unproductive, the soil being chiefly composed of disintegrated sand-stone, and the detritus of granite, naturally producing nothing but mosses, and a few stunted pines and laurels; by the industry of the Chinese, and the copious application of human manure, it is made highly productive; and cultivation is carried on to the very summit of hills 1,000 and 1,200 feet high, the slopes of which are formed into terraces, to prevent the soil from being washed away by the rains. Smut appears to be the only disease to which the wheat is subject. Everything in the shape of a weed is carefully removed, and the utmost attention paid to prevent any noxious influence from injuring the crop. The land is prepared in the ordinary manner when the autumnal rains have fully soaked it. Having been plowed in a very loose manner, the clods are divided by a harrow, the pins of which have a cutting edge, which is drawn by a small ox, after which it is formed into deep and broad furrows, with intervening ridges for the reception of the plants, which, having been raised in nursery-beds, are transplanted when about five inches high in bunches on the long ridges, so as to occupy only one half of the ground. In each bunch of the transplanted wheat which I picked here (at Chusan) there were 29 plants or stalks; and a square yard contains 15 such bunches planted at equal distances. I examined 15 heads (ears) one from each stalk of the bunch, in their perfectly ripened state, and found them to contain as follows: 33, 45, 34, 49, 34, 40, 42, 32, 48, 45, 31, 33, 38, 34, and 44 grains each, giving an average produce of 38.8 per ear. An ounce avoirdupois contains 1067 grains; this gives 48.771333 to the apothecary's scruple, or 146.3213 to drachm.

The process of tillage is rather tedious, and the expense of ground considerable; but in return for this, the wheat takes deep root, and is well nourished. The manure employed in some places is the cake left after expressing the oil from mustard-seed, human and other hair, lime from burned shells; but human fœces and urine constitute the prevailing manure, and are so highly valued that they are carefully preserved by every family, and sold at a high price. To such an extent is the economy of this manure carried, that, to prevent any possible waste, privies are everywhere provided in the towns, and those who have occasion for them, not only invited to enter, but paid for so doing with a small piece of money. All these several substances, with a vegetable expressly cultivated for the purpose, straw and weeds are thrown into vats, of which several are placed for security at the door of every house, and left to ferment till required. Wheat is called by the Chinese "syiy nia," and barley "drow nia," or "the poor man's grain;" the former being called, when speaking to us, "mandarin chow," chow or food. The latitude here (at Chusan) is 30° 0′ 20″, at Amoy 24° 25′ 0″; but the cold is both longer and more severe here than at Amoy during the season of wheat. There is a wheat here without a beard, a specimen of which I have. It is cultivated in the same manner as the other. The average weight of each ear in an undried state is 15 grains. Great attention is paid to the manuring and irrigation if the season happen to be dry. During the winter the wheat remains very low, and no further attention is paid to it by the husbandman. In April and May the growth is extremely rapid; but the Chinese do not allow the crop to attain perfect maturity before they cut it, lest the grain should fall out. When cut it is left to dry, and the grain is then beaten out in a tub.

Editor's Table.

ANNUAL REPORT FOR 1843, of Hon. H. L. Ellsworth, Commissioner of Patents, being Doc. No. 177; Ho. of Reps., 28th Congress, 1st session. This report occupies 335 pages octavo, and is not only the fullest and most complete document yet issued from the Commissioner's bureau, but we will add also, the most useful and varied. If leisure permit, we intend making for our next number, an abstract of the most essential parts of it relating to agriculture; and in the mean while, to give the reader an idea of the valuable matter embodied in it, we subjoin the table of contents.

Commissioner's report—Statement of receipts and expenditures—Tabular estimate of the crops—Remarks on the tabular estimate—The season—Wheat-crop, varieties of, depth of sowing, product, &c., amount and selection of seed, time of sowing; experiments, diseases in, and prevention, &c., use of in manufactures—Barley-crop, varieties of, &c.—Oat-crop, varieties of—Rye-crop, varieties of, multicole, &c., use in manufactures—Buckwheat crop—Maize or Indian corn crop, calico variety—Potato-crop, failure and diseases, &c., J Stirrat's letter, use in manufactures, &c.; modes of planting, &c.—Hay-crop, gama, tussac, and arundo-grass, &c.—Flax and hemp, varieties, manufacture and use—Tobacco-crop, varieties—Cotton-crop, exportation and consumption of, &c., experiments in raising, &c.—Rice-crop, varieties—Silk-crop, varieties of mulberry-tree, kind of worms, causes of failure and mode of feeding, method of preparing, manufacture, profit, &c.—Sugar-crop, Rieulleux's improvements, maple, cornstalk, experiments in—Wine-crop,grapes,&c.—Comparison of products of other countries—Other agricultural products, artichoke, spurry, Bokhara-clover, Anjou-cabbage, madder, olives, indigo, tea, oil-plants, mustard, &c , cranberries, apples, eggs, &c.—Products of the dairy, milk and cream, &c., butter; Dutch, Goshen, modes of working and preserving, cheese, modes of making, &c.—Lard and lard-oil, experiments, &c.—Kiln-dried meal and flour, experiments, &c.—Feeding cattle, Experiments, &c.—Manures, urine, soot, charcoal, salt, nitrate of soda, guano, experiments, artificial, &c., blood, green manuring, experiments, Jauffret's mode and experiments—Home market—Foreign market—Provision trade with England—Conclusion—Letter of S. Scott on the acclimation of seeds—Comparative tariffs on agricultural products—Canada tariff—Bills of sales of American produce in England—Table of imports of produce—Preparation of provisions for British markets—The new tariff—Letter of W. Milford on freight—Mode of preparing hams—On plank roads in Canada—Letter of R. L. Robertson on Ericsson's propellers on Lake Erie—On the culture of pumpkins on grass-land—Unburnt brick houses—Boucherie's process of hardening wood—Morse's electro-magnetic telegraph—Mode of laying pipe—Report of examiners on the arts: metallurgy, of the manufacture of fibrous and textile substances, steam of gas engines, boilers, generators, &c., navigation and marine implements, civil engineering and architecture, of land conveyance. comprising carriages and other vehicles, of grinding-mills and horse-powers, &c., of lumber; machines for sawing, planing, mortising, &c., of fire-arms and implements of war, including the manufacture of gun-powder and shot, miscellaneous, agriculture, chemistry, fine arts, hydraulics, calorific, &c.

THE SOUTHERN AGRICULTURIST, HORTICULTURIST, AND REGISTER OF RURAL AFFAIRS, (Phœbus, what a long name;) adapted to the southern section of the United States: New Series, Volume IV., published by A. E. Miller, No. 4 Broad street, Charleston, S. C., 40 pages octavo, monthly—price $3 year.—Judging from numbers 4 and 5 at hand, this is a well-sustained and excellent work, and calculated to greatly benefit the planting interest—we heartily wish it a large subscription list. It is singular that we did not know of the existence of our southern namesake till about a month since. Will it please forward us numbers 1, 2, and 3, for current volume?

As we have set our face against the outrageous and exorbitant post office taxes levelled upon the *many* for the *benefit* of the *few*—an odious aristocratic measure—and are determined not to pay one mill of them when we can help it, till fairly and justly cut down and reformed, we shall be obliged if the Agriculturist, the Planter, Farmer and Gardener, and all journals with covers to them, would send us their exchange as the Prairie Farmer does, namely, with the leaves unstitched and uncut, and the cover folded over them loose. When stitched, they are classed with pamphlets, and we are charged full postage; the stupid, odious law, not allowing them to come free like other exchanges. It is not the *amount* of postage that we care for, but the principle of the thing; and as we are not strong enough to resist the arbitrary and unjustly capricious pamphlet regulation, we desire our contemporaries to enable us to evade it. According to present appearances, we may look in vain for any measure of reform from the *dis*honorable, pugilistic, and never-ending gabbling Congress now in session; it has no idea of sacrificing its agreeable franking privilege, and with this privilege it is known there can be no substantial reduction of the rates of postage. We have been informed that seven eighths of the weight of the mails is made up of political documents, franked for selfish, partisan purposes; and dull, sleepy reports sent over the country, which are scarce ever read or cared for by those to whom they are addressed. Reform this gross abuse and letters and pamphlet publications may be carried for one third the rates they now cost the people.

EUROPEAN AGRICULTURE AND RURAL ECONOMY, from Personal Observation, by Henry Colman, Vol. I., Part I. The late hour at which we received the first number of this long-expected European Agricultural Tour of Mr. Colman, prevents our giving it that notice now that we should otherwise have done, and which its intrinsic merits deserve. It must be premised that Part I., just received, is merely preliminary to the more important subject, viz: Practical Agriculture. The contents of this at hand are:

I. General Facts and Considerations.
II. Particular Objects of Inquiry.
III. Science of Agriculture.
IV. English Agriculture.
V. English Capital.
VI. General Appearance of the Country.
VII. Hedges and Enclosures.
VIII. Iron and Sunken Fences.
IX. The English Parks.
X. Ornamental Shrubs and Flowers.
XI. Climate of England.
XII. Agricultural Population, including under this head, 1. Landlords, Rents, and Taxes. 2. The Farmers. 3. The Agricultural Laborers.
XIII. Allotment System.

Article XII. occupies just half of Part I., and the greater share of it is devoted to division 3, "The Agricultural Laborers," which is treated with fulness and in the proper spirit. We do not hesitate to say, that the "Gang System" of labor which prevails on large farms in some districts of England and Scotland, is one of the most atrocious systems of suffering and slavery, that the cupidity and tyranny of man has ever put in practice; and we wonder that any one calling himself a Briton, does not blush with shame, when he opens his mouth, and presumes to speak of the horrors of southern America or West India servitude. The kind-hearted Howitt, in his Rural Life in England, treats with becoming feeling and indignation the "Bondage System" prevailing in Northumberland; but that is freedom, *ease*, and *affluence*, in comparison with the accursed "Gangs." We did not visit any of those large farms when in England, where the atrocious system of "Gangs" prevailed, yet we heard enough of it. But of the wants and sufferings in the midst of abundance—the grinding, heartless oppressions of the peasantry—the general field-labor of women as well as men—and above all, of the occupation of cattle-stalls and stables, promiscuously together at night, by the Irish harvesters of both sexes, we were often painfully made cognizant; and the reason why we never more than barely hinted at these things, in our own Sketches of England, is, that we thought the subject inappropriate to our journal—that touching it by a foreigner would only give offence, cause irritation, and be productive of little good. We think, however forbearingly Mr. Colman has treated this matter, that his publication of it will cause many heart-burnings in Great Britain, and shut the door to him in certain quarters against future inquiries. We hope the magnanimity, good sense, and feeling of the land-holders there will prevail, and that Mr. C.'s observations will be taken as they are meant—in kindness, and to correct a great and most atrocious evil; still, we greatly doubt whether the pride of human nature will allow it. It must be borne in mind that there are many noble exceptions, in the treatment of the peasantry of Great Britain and Ireland, and that their condition on some some estates is quite enviable—even in comparison with many of our own independent farmers.

We intend giving extracts in our next from this Agricultural Tour. Its publication is quite an era in American literature, and we shall be greatly mistaken if it be not sought for with avidity, and read with interest by the public generally. It will treat of the Agriculture of the Continent of Europe, as well as that of Great Britain and Ireland, and be extended to ten parts of about 100 pages each. The work is written in a lively agreeable style, and handsomely printed. The subscription price is $5, of which $2 is payable on the delivery of Part I. Published by Arthur D. Phelps, Boston, Mass. Saxton & Miles, 205 Broadway, New York, agents in this city.

Outlines of the System of Education proposed to be adopted in Franklin College, at Elm Crag, five miles from Nashville, Tenn., is the title of an octavo pamphlet of 12 pages sent us. In this college, the sciences and languages are to be taught at the same time with the practice of Agriculture, Horticulture, Stock-breeding, and the Mechanic arts, so far as they regard the implements of husbandry. In such a system of education we need not say that we heartily coincide. Donations of books, implements, and money, are solicited by a highly respectable committee, and we know of no object more deserving public patronage. Let those who have ability give liberally.

Transactions for 1843, of the New York State Agricultural Society, together with an abstract of the proceedings of the County Agricultural Societies, Vol. III.—Here is a goodly volume of nearly 700 pages octavo, the contents of which may be anticipated by its title. Many of the articles in this volume are very good indeed, and others we think equally indifferent. Among those of most value is a Treatise on Insects by the late Willis Gaylord, being a prize essay. There are several other articles of merit, but we have not space to mention them now. Some who write for the Transactions, are too much in the habit of vamping up communications which have appeared before in the agricultural journals, a practice which we think should not be allowed in future volumes; as the articles contributed, to be entitled to admission, ought not only to be practically useful, but as *fresh* and *original* as possible. Made up in this manner, it would add greatly to the interest of the publication.

The Cotton Plant, being a Memoir on the Origin, Cultivation and Uses of Cotton, from the earliest ages to the present time, with especial reference to the Sea-Island Cotton Plant, including the improvements in its cultivation, and the preparation of the wool, &c., in Georgia and South Carolina; read before the Agricultural Society of St. John's, Colleton, November 13th, 1843, and the State Agricultural Society of South Carolina, December 6th, 1843, and by both societies ordered to be published. By Whitemarsh B. Seabrook, President of the State Agricultural Society of South Carolina. Published by A. E. Miller, Charleston, S. C., price 25 cents. This is the best and most complete history of the cotton plant we have yet met with, Mr. Seabrook having treated the subject with uncommon ability. This memoir ought to have a large circulation, and we earnestly exhort all those engaged in the culture of cotton to an attentive perusal of its contents. We can not but congratulate the south on the awakened interest that this and other valuable documents recently published in that quarter, seem to be creating, in regard to its valuable agricultural products.

Good Butter-Cow.—We notice in the Massachusetts Plowman that a three-year old native cow belonging to Mr. George Jewett, suckled her calf five weeks, supplied one family with milk during the season, and made in one year, 273 lbs. 12 oz. butter. Her feed was hay and grass alone. If this be so, she is an extraordinary heifer, and we would like to see a more particular description of her.

Goose-Oil for Sore Teats.—The same paper above, recommends this as the best article to heal sore teats and chapped hands. Washing the teats and hands in warm milk fresh from the cow, we have often found a good remedy, and rubbing them with cream still better.

Remedy for the Curculio.—Make a strong lime and mix it with lye, and the last of May or the first of June, pour at least two pailfuls of this liquid around the roots of each plum tree, and scarcely curculios enough escape sufficiently to thin the fruit. We wish Mr. Kenrick had stated in what proportion he mixed the lime and lye.—*Condensed from Hovey's Magazine.*

Cure for a Foundered Horse.—Take a pint of hog's lard and heat it boiling hot, and after cleaning his hoof well and taking off his shoe, put his hoof in the lard, and with a spoon apply it to all parts of the hoof as near the hair as possible. The application should be to the foot of each foundered limb, and be made as soon as ascertained.—*Louisville Journal.*

Large Berkshire.—Mr. Hutchins of Logan county lately brought a hog to this city, which, though but three years old, and *not fat*, weighed *fourteen hundred pounds!* The hog belongs to the family of Berkshires, and a sight of him will satisfy those who have had an antipathy against that respectable family, that Berkshires can be grown to any *reasonable* size—if 1,400 lbs. will limit their wishes in this respect.—*Sangamon Jour.*

Great sale of Wool from one Estate.—The celebrated farm of R. H. Rose, at Silver Lake, Penn., maintains ten thousand sheep. A few days since, the proprietor sold at one time to a manufacturer at Ithaca, 3,000 bales of wool, each bale weighing from 150 to 180 lbs., at 31 cents per pound.—*Northern Pennsylvanian.*

To Exchange Papers.—We have frequently adverted to the great injustice done us by some of our contemporaries, in copying articles from us without credit, and when such papers have been sent back to the editors with this marked omission, in nine cases out of ten they have taken no notice of it. We say now, for the last time, if corrections are not hereafter promptly made, we are determined immediately in every instance to stop the exchange.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, MAY 23, 1844.

ASHES, Pots,	per 100 lbs.	$4 31	to	$4 37
Pearls,	do.	4 75	"	4 81
BACON SIDES, Smoked,	per lb.	3½	"	4½
In pickle	do.	3	"	4
BALE ROPE	do.	6	"	9
BARK, Quercitron	per ton	23 00	"	24 00
BARLEY	per bush.	60	"	62
BEANS, White	do.	1 25	"	1 75
BEEF, Mess	per bbl.	5 00	"	7 00
Prime	do.	3 00	"	5 00
Smoked	per lb.	5	"	7
Rounds, in pickle	do.	3	"	5
BEESWAX, Am. Yellow	do.	28	"	31
BOLT ROPE	do.	12	"	13
BRISTLES, American	do.	25	"	65
BUTTER, Table	do.	12	"	15
Shipping	do.	8	"	12
CANDLES, Mould, Tallow	do.	9	"	12
Sperm	do.	29	"	38
Stearic	do.	20	"	25
CHEESE	do.	3	"	7
CIDER BRANDY, Eastern	per gal.	35	"	40
Western	do.	35	"	40
CLOVER SEED	per lb.	7	"	8
COAL, Anthracite	2000 lbs.	4 25	"	5 00
Sidney and Pictou	per chal.	5 75	"	6 25
CORDAGE, American	per lb.	11	"	12
CORN, Northern	per bush.	50	"	52
Southern	do.	46	"	48
COTTON	per lb.	5½	"	10
COTTON BAGGING, Amer. hemp	per yard.	16	"	18
American Flax	do.	15	"	16
FEATHERS	per lb.	28	"	33
FLAX, American	do.	8	"	8½
FLAX SEED, rough	per 7 bush.	9 00	"	9 75
clean	do.	10 00	"	10 50
FLOUR, Northern and Western	per bbl.	4 62	"	5 00
Fancy	do.	5 25	"	5 50
Southern	per bbl.	4 62	"	5 00
Richmond City Mills	do.	6 25	"	6 50
Rye	do.	3 12	"	3 50
HAMS, Smoked	per lb.	5	"	10
Pickled	do.	4	"	7
HAY	per 100 lbs.	33	"	38
HIDES, Dry Southern	per lb.	9	"	11
HEMP, Russia, clean	per ton.	180 00	"	185 00
American, water-rotted	do.	140 00	"	180 00
do dew-rotted	do.	90 00	"	140 00
HOPS	per lb.	7	"	9
HORNS	per 100	1 25	"	5 00
LARD	per lb.	5½	"	6½
LEAD	do.	3½	"	4
Sheet and bar	do.	4	"	4½
MEAL, Corn	per bbl.	2 50	"	2 75
Corn	per hhd.	12 00	"	12 50
MOLASSES, New Orleans	per gal.	27	"	30
MUSTARD, American	per lb.	16	"	31
OATS, Northern	per bush.	31	"	33
Southern	do.	28	"	31
OIL, Linseed, American	per gal.	73	"	75
Castor	do.	90	"	95
Lard	do.	60	"	62
OIL CAKE	per 100 lbs.	1 00	"	— —
PEAS, Field.	per bush.	1 25	"	— —
PITCH	per bbl.	1 12½	"	1 37
PLASTER OF PARIS	per ton.	2 37	"	2 50
Ground, in bbls. of 350 lbs	per cwt.	1 12	"	— —
PORK, Mess	per bbl.	7 00	"	10 00
Prime	do.	6 00	"	8 00
RICE	per 100 lbs.	2 75	"	3 25
ROSIN	per bbl.	60	"	80
RYE	per bush.	69	"	71
SALT	per sack	1 00	"	1 50
SHOULDERS, Smoked	per lb.	4	"	6
Pickled	do.	3	"	4
SPIRITS TURPENTINE, Southern	per gal.	31	"	35
SUGAR, New Orleans	per lb.	5	"	8
SUMAC, American	per ton	25 00	"	27 50
TALLOW	per lb.	6	"	7½
TAR	per bbl.	1 50	"	1 62½
TIMOTHY SEED	per 7 bush.	11 00	"	14 00
TOBACCO	per lb.	2½	"	6½
TURPENTINE	per bbl.	2 31	"	2 75
WHEAT, Western	per bush.	1 02	"	1 05
Southern	do.	95	"	1 00
WHISKEY, American	per gal.	22	"	24
WOOL, Saxony	per lb.	35	"	50
Merino	do.	35	"	40
Half-blood	do.	25	"	30
Common	do.	20	"	25

New York Cattle Market—May 20.

At market, 1,000 Beef Cattle, (160 southern,) 130 Cows and Calves, and 600 Sheep.

PRICES.—*Beef Cattle.*—Prices are well sustained with a good demand, and we quote for retailing sorts $5.50, *a* $7—all but 50 sold.

Cows and Calves.—The market was cleared at $18 *a* $30.

Sheep and Lambs—All sold at $1.75 *a* $4 for sheep, and $1 50 *a* $3.50 for lambs.

Hay—A good supply of loose at 50 *a* 62½ cts. the cwt.

—

REMARKS.—*Ashes*, notwithstanding the late unfavorable news from Europe, continue firm for export. *Cotton* has fallen ¼ of a cent since the arrival of the Britannia, and is without activity or firmness. Export from the United States since 1st September last, 1,186,846 bales; same time last year, 1,737,074; same time year before, 1,190,544. *Flour* and *Grain* remain steady, the late European news not having affected their prices. *Hay* continues abundant and dull. *Hemp* seems to be getting more into demand. *Molasses* firm, with an upward tendency. *Naval Stores* the same. *Beef* and *Pork*, we regret to say, are excessively dull, and the transactions limited. *Rice* and *Sugar*, in moderate request. *Tobacco*, quite active for export at firm prices.

Money has again become very abundant, and plenty to be had on good paper at 5 per cent.; on real estate, 6 to 7 per cent.

Stocks have steadily advanced the past month, and choice ones continue to be sought for investment.

Business generally, very heavy through the whole spring months, and things look promising for the summer.

The weather during May has been rather cold and rainy; in consequence of which, many of the seeds in low moist lands have rotted in the ground, and made a second planting necessary. Grass, Wheat, Barley, and Oats are very forward, and looking well, and promise a great yield. In the middle states, Corn, Hemp, and Tobacco, are equally in the advance. From the south, our accounts of the weather are not so favorable. Early in the season they had deluging rains, which have raised the Mississippi and several of its most important tributaries to so great a height as to overflow their banks, and cause immense destruction on the bottoms, to the crops of cotton and corn; the flood, also, has swept off large herds of cattle and swine, and been the means of much other destruction. This, latterly, in other parts, has been followed by an alarming drought which has proved nearly as destructive on the high lands to the cotton, &c., so that the seed in many fields has not come up, and in others the plant has been cut off by the worm, and made a second planting in many instances necessary. We can only hope that this may not be too late for a good crop.

TO CORRESPONDENTS.—Communications the past month have been received from D. Lee, Examiner, J. H. Lyman, John W. Knevels, Thomas Spaulding, A Traveller, Henry A. Field, Thomas Affleck, and C. N. Bement.

H. W. will find a complete description of the Pheasant-Fowl he inquires about, under the name of the Bolton-Grey or Creole-Fowl, in Mr. Bement's forthcoming work on Poultry. We have heard them highly commended for laying, but do not believe them superior to the Polands.

J. D. asks if we know of any pure white fowls with black top-knots? We do not, and shall be obliged if any one can inform us. The nearest approach to this kind of fowl within our knowledge, is owned by Mr. C. N. Bement of Albany. They have white bodies with dark speckled necks and top-knots. We presume these, as well as the kind inquired after by J. D., are a cross between the White and Black Polands, and then bred as a distinct variety. As J. D. is curious in such matters, we recommend his experimenting in them.

PREMIUM EAGLE, SUBSOIL, AND OTHER PLOWS.

The subscriber having been appointed agent in this city for the sale of the celebrated Premium Plows, made by Ruggles, Nourse, & Mason, of Worcester, Massachusetts, now offers them at the manufacturers' home prices. They are calculated alike for the northern farmer and southern planter, and embrace every variety, Cotton and Rice plow, Stubble, Sod, Road, and Subsoil. Prices from $3,50 to $15,00, according to the kind.

The great number of premiums which these plows have obtained at the most important plowing-matches, and the universal satisfaction they have given wherever introduced, render it unnecessary to particularise their merits. They are made of the best materials, are highly finished, and combine light weight and easy draught, with great strength and durability.

A. B. ALLEN, 205 Broadway, N. Y.

THORP'S THREE-SHARE PLOW.

One of Thorp's Three-Share Plows, for which a premium was awarded at the late Fair of the American Institute, for sale, price $10. Inquire of the Editor of the American Agriculturist, or at the office of the American Institute in the Park 2t

AGRICULTURAL WORKS,

For sale by SAXTON & MILES, 205 Broadway, New York.

Clater and Youatt's Cattle Doctor, containing the causes, symptoms, and treatment of all the diseases incident to Oxen, Sheep, and Swine. Price 50 cents.

Dumas & Boussingault's Chemical and Physiological Balance of Nature. Price 50 cents.

The American Race Turf Register, Sportsman's Herald, and General Stud Book. By P. N. Edgar. Price $2.

Liebig's Agricultural and Animal Chemistry. Price 50 cts.

Liebig's Familiar Letters on Chemistry. Price 12½ cts.

Loudon's Encyclopædia of Agriculture, English. Price $10.

Loudon's Encyclopædia of Gardening. Price $10.

Bridgeman's Young Gardener's Assistant, new edition, much enlarged. Price $2.

The Farmer's Mine; being the most complete work on Manures ever published. Price 75 cts.

The Vegetable Kingdom, or Hand-Book of Plants. Price $1.

Youatt on the Horse; a new edition. Price $2.

The Complete Farmer, and Rural Economist, by Thomas G. Fessenden. Price 75 cts.

The New American Orchardist, by Wm. Kenrick. Price 87½ cts.

The Honey Bee, its Natural History, &c., with 35 engravings. Price 31 cts.

Bees, Pigeons, Rabbits, and the Canary Bird, familiarly described. Price 50 cts.

The American Poultry Book; being a practical treatise on the management of Domestic Poultry. Price 35 cts.

A Treatise on Sheep, with the best means for their general management, improvement, &c.; by A. Blacklock. Price 50 cts.

The Theory of Horticulture; or an attempt to explain the principal operations of Gardening upon physiological principles; by John Lindley. Price $1,25.

Gardening for Ladies, and Companion to the Flower Garden, by Mrs. Loudon. Price $1,50.

American Husbandry. Price $1.

The Farmer's Instructor; consisting of Essays, practical directions, and hints for the management of the Farm and the Garden. By J. Buel, 2 vols. Price $1.

A Muck Manual for Farmers; by Samuel L. Dana. Price 50 cts.

Chemistry Applied to Agriculture; by M. Le Comte Chaptal. Price 50 cts.

The American Gardener; by William Cobbett. Price 75 cts.

A Treatise on the Vine; embracing its History, and a complete dissertation on the culture and management of Vine Yards; by Wm. R. Prince. Price $1,50.

The Farmer's Encyclopædia, and Dictionary of Rural Affairs; by Cuthbert W. Johnson. Adapted to the United States by Gouverneur Emerson. Price $4.

Cattle; their Breeds, Management, and Diseases. Price $2.

IN PRESS.

The American Poulterer's Companion, by Caleb N. Bement, with numerous illustrations.

MADDER SEED.

The very high prices which the Madder Dyes of France and Holland have attained, are sufficient to excite the attention of our intelligent agriculturists. It is only necessary to take into consideration the immense quantity of Madder consumed in the various manufactories of the United States, to be convinced that the cultivation of this plant would be attended with great advantages, and that it may be undertaken with certainty of profit.

The Madder root can be cultivated in almost every climate. The sands of Silesia, the marshes of Zealand, the arid soils of the south of France and Persia produce it, and of almost equally good quality. It is well known that atmospheric influences make but little impression upon a root, the valuable part of which grows beneath the surface of the soil; and what a powerful guarantee does this circumstance afford to the cultivator of the Madder. It protects him from all varieties of temperature, which so frequently destroys crops of a different nature. For those who cultivate this root, a crop is assured as soon as the seed which they have put into the ground begins to germinate.

A special report upon the cultivation of this plant was laid before the Academy of Sciences at Paris, and a prize awarded to the author. It was written by M. de Gasparin, Peer of France, Member of the Institute, and formerly Minister of the Interior. French Madder Seed, obtained from last year's crops, may be had of the subscribers, who have received a consignment of a considerable quantity. Price $1 per lb., or at reduced rates when a quantity is taken. J. M. THORBURN & CO., 15 John st., N. Y.

JUST PUBLISHED,

COLMAN'S AGRICULTURAL TOUR.

The first part of Rev. Henry Colman's Report on European Agriculture and Rural Economy, is received. The work will be completed in ten numbers, at $5,00, $2,00 to be paid on the delivery of the first number.

SAXTON & MILES,
205 Broadway.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars: eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 miles, without the State.

ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

AGRICULTURAL IMPLEMENTS, &c.

The subscribers are agents in this city to sell the following celebrated Machines, viz:

Hussey's Premium Corn and Cob-Crusher, price from $25 to $40.
Dickey's " Fanning-Mill, " $20 to $30.
Platt's " Portable Grist-Mill, &c., $30 to $100.
Also for sale, Hovey's Premium Straw-Cutter, (spiral knives,) prices from $15 to $25
Warren's Premium Straw-Cutter, $15 to $25
Hull's Cornstalk and Straw-Cutter, $20

Being proprietors of the now celebrated "Warren's Improved Portable Horse-Powers and Thrashing-Machines," they continue to manufacture and sell them with increased success. Some twenty gentlemen having been present at an exhibition of the operation of these machines, state that "having witnessed the practical utility of 'Warren's Improved Horse-Power and Thrashing-Machines,' they cheerfully recommend them to the attention of agriculturists as the most perfect inventions of the character that have ever fallen under their observation."

With the Two-Horse Machines, 30 bushels of oats or barley is easily thrashed per hour, and wheat and other small grain in proportion, clean and excellent, leaving the straw *unbroken* so that it may be gathered into bundles; and not more than three persons are required to tend them. One, two, and four-horse Machines are manufactured. Prices very low. Two-Horse Power and Thrasher together only $75.—One-Horse $60.—Four-Horse from $100 to $110. Terms, cash in this city on delivery. Liberal deductions made to dealers on all kinds of such machines as we sell.

L. BOSTWICK & CO.
146 Front street, New York.

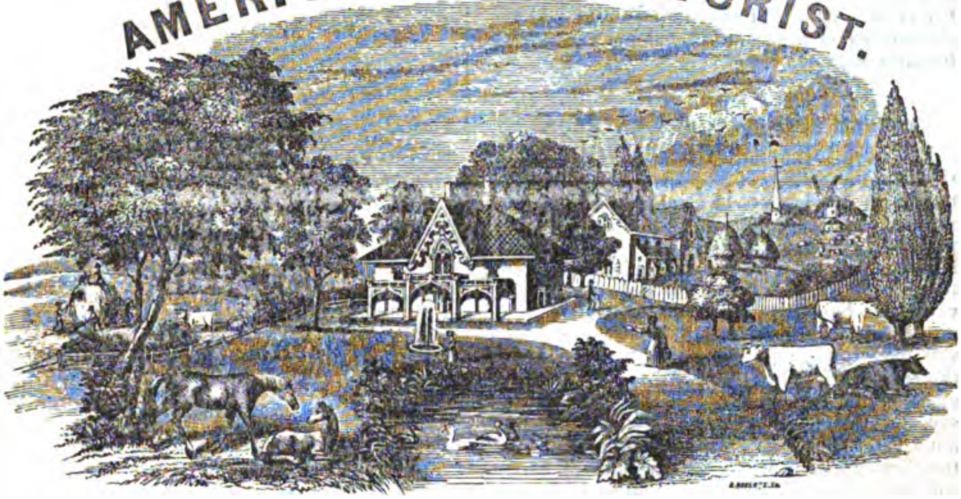
FARMS AND REAL ESTATE FOR SALE.

Several very fine farms in different parts of the United States can be had upon the most reasonable terms. Also, beautiful country seats in this vicinity, at very cheap rates, and real estate in the city. A. B. ALLEN, 205 Broadway.

CONTENTS OF JUNE NUMBER.

Culture of Corn, - - - - - - - - - Page 161
Sketches of the West, No. 4,
Culture of the Potato, - - - - - - - 162
Farm of Mr. Woolsey, - - - - - - - - - 163
Dorking Fowls, - - - - - - - - - - 164
Culture of the Sugar-Cane, No. 1, Thomas Spaulding, - 165
Saxon Merino Sheep, Samuel F. Christian,
Odd Rows of Corn, J. S. S., - - 167
Culture of Tobacco, No. 1, D. P. Gardner, - - - - - 168
To Destroy Worms on Rose-Leaves, M. Van Beuren,
The Physician an Agriculturist, Dr. Stevens, - 170
Agricultural Errors, Wm. Partridge, - - - - - - 171
The English Oak in America, B.,
Tornillo or Screw-Grass, J. H. Lyman, - - 172
Clearing Forest Lands, E. Carpenter,
The Georgia Table-Pea, D. B., - - 174
Berkshire Pigs, L. F. Allen,
Grafting, D. Jay Browne, - - 175
A Moveable-Fence, R. L. Allen, - - - - - - - - 176
A Piggery, T. C. Peters,
To Kill Lice on Cattle, - - - - 177
A Pennsylvania Dairy, Henry Chorley, - - - - 178
The Best Sheep Country, Jeremiah F. Hunt,
Value of Agricultural Papers, Alexander McDonald,
Additional Premiums,
A New Variety of Spring Wheat, Jos. C. G. Kennedy, - 179
New Jersey Fences, A. R. D., - - - - - - - - 180
The Cow-Pea, Peach, Cuba-Tobacco, &c., T. Affleck, - 181
Long-Wool Sheep, Leonard D. Clift, - - - - - - 183
Fatting Steers, Jno. M. C. Valk,
Elder-Berry Wine, Mrs. S., - - 184
Statistics of Fruit, S. C. Higginson,
Northern Calendar for June, - - 185
Southern do. do. - - - - - - - - - 186
Foreign Agricultural News, Chinese Agriculture, &c., &c., 187
Editor's Table, Annual Report of Hon. H. L. Ellsworth, European Agricultural Tour of Henry Colman, Esq., &c., &c., - 189
Review of the Market,
Answer to Correspondents, - - - - - - 191

THE AMERICAN AGRICULTURIST.



Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. III. NEW YORK, JULY, 1844. NO. VII.

A. B. ALLEN, Editor. SAXTON & MILES, Publishers, 205 Broadway

CUTTING GRAIN.

WE must make the same reference to former volumes of this periodical in cutting grain, as we have below in cutting grass. Since writing those articles alluded to, all subsequent experience and information which we have gathered, go to sustain the conclusion that when the berry of grain of any kind has well-filled and just begun to glaze, so that passing the end of the thumb-nail over it leaves a slight indenture, is the best time for cutting. A friend in Massachusetts informs us, that he made this his test in cutting his rye last year, and that the flour made from it was whiter and sweeter than any he had ever harvested before, there was more of it also per bushel, and less bran. This looks reasonable; for it is asserted that after this stage of the filling of the berry, longer standing only tends to change the flour into a thicker rind of the grain, and consequently forms more bran. In the case of our friend's rye-flour above, he observed that it was nearer wheat than any he had ever tasted. Two other important considerations in cutting grain early force themselves upon us. 1st. We have more time for the harvest, and are more forward with our work. 2d. The grain shells scarcely at all, there is consequently little or no loss from this source. 3d. Since the introduction of machines for cutting straw, this is an article which is fast getting into general use for fodder, and the straw saved by early cutting proves greatly more nutritive and palatable to the stock than that cut late. Wherefore, we earnestly entreat our farmers to pay greater attention to the early cutting of their grain than they have heretofore been in the habit of doing.

THE AMERICAN AGRICULTURIST ALMANAC.

THIS valuable Almanac for the year 1845, has just been published by Saxton & Miles, 205 Broadway. It contains 40 pages octavo, of a size nearly as large as this periodical, filled with useful and entertaining matter for the Farmer, Planter, Gardener, and Stock-breeder. There are double sets of tables in it, calculated for the East and West, and we think this will be found one of the best and most popular Almanacs ever issued. The publishers have put it at the very low price of 6¼ cents at retail, $3 per hundred, and $20 per thousand. The work is stereotyped, and can be had in any quantity. It is expected 50,000 copies, at least, will be disposed of this year. It is got out thus early, and placed at the extremely low price above named, in order to make it an object to our friends to favor the publishers with their orders. To any one desiring it, advertisements of a single page or more will be inserted at the additional cost of setting up the matter. By then purchasing a quantity of such edition of the almanac they will avail themselves of a means of making known their business not often found.

FARM OF THE MESSRS. LATHROP.

We have just returned from a ten days' excursion up the valley of the Connecticut, from its mouth to the borders of Deerfield, in Massachusetts, and have been struck with wonder and surprise at the rich and varied beauty of its scenery; but above all, with its great fertility. Several of these localities, comprising the richest parts of the valley, we have not visited since childhood; in the meanwhile, we have wandered over the most vaunted sections of the south and west, and with the recollections of the deep virgin soil of these regions fresh in our memory, we do not hesitate to say, that, with the exception of the Mississippi, not a valley there of the same length, can exceed the Connecticut in width and fertility of bottom, and general capability for agricultural purposes. The meadows of Northampton and several other towns, are equal to the boasted plains of Pickaway, on the Sciota. Here they annually obtain 60 to 70 bushels of corn per acre, with ordinary cultivation; on the Sciota and Miami they can get no more; and yet the Connecticut valley has been hard cropped by the white man for 200 years, and how long before by the red man, no one knows! It is customary with every traveller to harp upon the *poverty* of New England soil, as if the country were all mountainous rocks; poor, gravelly hills; and famished sandy plains. Such persons know not New England—they have scarcely taken a bird's-eye view of it, and their observation may be set down as of the most superficial kind: for many is the sweet grass-producing mountain there —the fertile hill—and the deep, rich alluvial valley. Its soil, generally, though rather stony, is a quick and grateful one, and when judiciously stocked and cultivated, repays a fair percentage on the capital and labor expended upon it. This is a fruitful subject with us, and we could expatiate upon it to the end of a volume; and though space now forbids extended notices, yet jottings from our notes may be sprinkled over our columns for six months to come. Massachusetts is a glorious old state—we have revisited it with feelings of intense pleasure, and proud are we to add, that here we drew our natal breath—here received our first instruction—and here passed childhood's golden hours.

The Farm of Messrs. Wells and Paoli Lathrop is situated about one mile above the flourishing village of South Hadley Falls. It comprises about 200 acres, mostly of gently rolling land, naturally of a good, strong soil, but previous to their purchase in 1833, it had for a long time been under the *skinning* course of cropping, a "course," we regret to add, which still seems the most fashionable and general in the United States. The first movement here was to stock the land with as many animals as it would support, in order to make manure for its renovation; they then gathered up all that was to be had at a reasonable rate in the neighborhood, and, in addition, made an immediate resort to plaster, at the rate of 100 lbs. or so to the acre—it costing ground, at the village, $8 per ton. Some parts of the farm were springy, and abounded with bushes, rushes, and coarse water-grass; these have been drained, plowed, cropped, and laid down to grass; and thus the patches which a short time ago were worthless swamps, are now among the best and most productive meadows. Where three fourths to one ton of hay were formerly cut, two and a half to three tons are now obtained, and there is not a doubt but the other crops have increased in an equal ratio, and that the whole products of the farm, on the average, have at least been trebled by the Messrs. Lathrop since they came into its possession; and we are glad to add, that they do not mean to stop here, but keep on the broad road of improvement, trusting that they may eventually quadruple if not quintuple them. Nor in such expectations need any one be too sanguine; for we can point to several fields where not over 15 to 20 bushels of corn were formerly grown to the acre, which now yield 75 to 100 under a careful system of improved cultivation, and rye, wheat, roots, and grass, in proportion. We scarcely know yet, in the United States, what a farm may be made to produce.

The farm-house, barn, and out-buildings here, are over a hundred years old: but they are neat, and in good repair, and with the old trees surrounding them, present a venerable appearance, which it is pleasing to contemplate. Nearer the road-side, Mr. Wells Lathrop has built him a tasteful residence, in modern style of architecture, with a pretty garden and ornamental grounds attached, belted in against the winds with thick rows of trees.

The Stock.—This is nearly all of thorough bred Durhams, South Down sheep, and the celebrated Mackay breed of swine. This stock we examined with interest, and must express our gratification of its high value and careful breeding. Princess is a magnificent great cow, and the most extraordinary animal, in one respect, we ever heard of. She is now *nineteen* years old! yet does not look to be over ten or eleven, is in fine condition from grass pasture alone, and, what is most surprising, her flesh and hide still handle, in her old age, better than half the choice cows a dozen years her junior. She brought a highly promising calf last October, which we had the gratification of seeing not only *alive*, but playfully *kicking*, and showing vigor and constitution enough to carry it well through to the age of its dam. Talk about the delicacy of Durhams—their degeneracy of constitution—their want of hardiness and vigor—and the necessity of restoring all these with some ill-bred, coarse, vulgar, dunghill cross! Bah! We have not patience to listen to such nonsense, and shall be infinitely obliged to any one who will show us a cow from this breed, or, rather, *no breed at all*, of the same age, and as enduring as Princess. Come, gentlemen, it is an easy matter to theorize from books, talk glibly, and pen a paragraph; but just be so good as to leave your studies now, if you please, turn working-men for a short time at least, and come down in to the cattle-yard; there is the place we want to meet you, with sleeves up, and line in hand. We challenge you to the trial. Now be so obliging as to extend yourselves a trifle, and we shall be highly gratified. It can be satisfactorily proved, that many of those cows which are put down in reports in Massachusetts as such famous "native" milkers, are *crosses* of the Durhams! No one is more ready to admit the value of our native animals than ourselves; at the same time, we are not going to stand by and see improved stocks depreciated, more especially when their own offspring are brought out (though, we will grant, probably unwittingly by the persons doing so) as the means of making these unfair and unjust comparisons. Those who boast so much about the native animals, are bound to show, when they bring them forward, that they have not a drop of improved blood in them; and to this proof, for one, we are determined to push them. We will accept of no guessing, no mere assertion, on so important a point. But to resume our subject.

If Princess is so large, we must confess we incline to such animals in the Messrs. L.'s herd as Louisa, Ruby, Lucilla, Adelina, &c.—of a fine medium size. They are the most profitable, and, to our eye, the most pleasing. In June 1842, then only 4 years old, Lucilla gave from 56 to 59½ lbs. of milk per day, which made 14½ lbs. of well-worked butter per week; in October following, she averaged 33 lbs. of milk per day, making 9 lbs. 14 ozs. of butter per week. This year she is doing still better, making rather over 15 lbs. of butter per week, on grass pasture alone, be it remembered; several other cows of this herd are doing nearly as well. Need we add more to convince those who have good pastures, and are determined to keep them so, that Durhams are their best stock? To those possessing lighter pastures, we say, emphatically, take Devons; but all good soils in New England, well cultivated, will easily carry Short Horns. The grade steers bred from these Durhams make first-rate working oxen, as can be shown by Mr. Lamb, and several others, neighbors to the Messrs. Lathrop, and there is this great advantage further in regard to them—they *mature at least two years earlier* than the natives. We were shown animals here of 4 years old, which had been hard worked from the age of 2 years, and yet they were as large as common 6 year olds. They had received no more care in their rearing than any good farmer would naturally bestow on his animals.

The stock bull at present in use here, is North America, out of Mr. D. C. Collins's, of Hartford, Ct., superior cow Narcissus, by Mr. Copes's, of Chester, Pa., imported bull Yorkshireman, from the celebrated herd of Mr. Bates, of England. North America is 3 years old, and a very good animal; indeed, one of the best we know in the United States. He is a decided improvement on the old stock, and we can say the same of his get, of which we saw several quite likely yearlings and calves.

The South Downs were procured of Messrs. Prentice and M'Intyre, of Albany, N. Y. One of the ewes was imported by the former gentleman. They are pretty stock, and are kept for mutton, this being a more valuable product here than wool.

Swine.—Of these the Messrs. Lathrop think they have the pure Mackay, if there is any such thing as this breed being left pure in the country. The history of these animals, and their pedigree, they have at length, and to any one curious on this subject, we recommend addressing themselves to South Hadley. As to these hogs, they much resemble the English and Irish Graziers. They are of fine forms, good size, and of a pure white color. They are thrifty, hardy, and mature early. Their color suits a Yankee's prejudice, and, upon the whole, they may be called an excellent farm hog.

Mr. Alonzo Lamb has an excellent farm adjoining that of the Messrs. Lathrop. It is under a high state of cultivation, with handsome buildings upon it, and a fine stock, principally of high grade Durhams. A noble cow, which he purchased of Mr. Wells' stock, of Boston, is one of the most massive animals we ever looked at, strongly reminding us, in this particular, of Mr. Bates' of England, Oxford cow, though not quite so fine and high bred. We should like to speak of Mr. Lamb's farm at greater length, but are already at the bottom of our sheet; yet will add, he has a 4 year old steer, one of the most superb creatures we have lately seen; with splendid horns, spread wide enough to carry a castle upon their tips. If this animal, well fatted, does not make a show a couple of years hence, we shall be greatly mistaken. We will go a hundred miles then to see him, any day.

CUTTING HAY.

In the neighborhood of towns and cities, hay is unquestionably the most important crop of the farmer; it is a matter of no small consideration to him, therefore, that his grass be cut at a proper time, and be secured in the best manner. We gave so full directions on this subject in our July Nos. of both Vols. I. and II., that we now barely subjoin an additional hint or two.

We think it important when the sun shines out clear, and the thermometer is at a range of nearly 80°, to have the grass only slightly spread, unless very heavy and thick on the ground, and cured as much in the winrow and cock as convenient. Made in this manner, the hay retains a brighter green color, and is sweeter and more nutritious. By being retained a day or so in the cock, it undergoes a partial sweating process, which makes it much less likely to ferment, fire, or injure in the stack or barn. If the grass be very long in drying, it changes much of its starch into woody fibre, which greatly injures it; but in ordinary weather, there is no such danger in this country as exists in the cooler and moister climate of Great Britain and Ireland.

With respect to the application of salt to hay as it is put up in stack or in the mow, 4 quarts to the ton has been our usual allowance; but if, from uncontrollable circumstances, it was not as well dried as preferred, we used 6 to 8 quarts. Many of our farmers are prejudiced against the use of any salt at all in putting up their hay, contending that it provokes the stock feeding upon it to an unnatural thirst; but we know from considerable experience on this subject, that when salted to moderation such is not the fact; for we have often made the experiment in feeding unsalted hay to our stock for a week or two in succession, and then such as was salted as above, and we could not perceive that the animals fed upon the latter drank more at the time than upon the former; and we are certain that they relished the salted hay better than the unsalted, eat it up cleaner, and seemed to thrive more from an equal quantity.

We observe that Mr. Pell, of Ulster county, has been somewhat sneeringly and rudely attacked in a cotemporary paper, for using one bushel of salt per ton in curing his hay nearly green. We beg leave to say, that Mr. P. has good authority (though probably unknown to him) for his practice. One of the best farmers in Massachusetts, a real *working* man, who has acquired a handsome independence from the *sweat of his own brow*, informs us that such was his system in curing clover hay upward of *forty* years ago, which he has continued to a greater or less extent, much to his benefit, to the present day. The practice of high salting is not uncommon in England, and on the Continent, especially in Germany; half a bushel of salt to a ton being the *least* quantity recommended. Old straw or hay, at the rate of one half to one fourth, is also advised to be mixed in with the new hay thus preserved, according to its greenness, as it is contended that "such will be brought back toward the state of green stalk, by the salt juice absorbed gradually reacting upon its organic constituents, rendering them, in a great degree, soluble, digestible, and nutritious." When old hay or straw is not to be had, bran is recommended instead; first mixing it with the salt, and then strewing it on the hay as it is put up. The following curious method of preserving *green* grass has lately been tried in Germany:—

Pits are dug in the earth from ten to twelve feet square, and as many deep. These are lined with wood, and puddled below and at the sides with clay. Into this the green crop of grass, clover, or vetches is put, just as it is cut. Four or five cwt. are introduced at a time, sprinkled with salt, at the rate of one pound to each cwt., and if the weather and consequently the crop be dry, two or three quarts of water should be sprinkled on each successive layer. Each layer of four or five cwt. is spread evenly over the bottom, is well trodden down by five or six men, and rammed as close as possible at the sides with wooden rammers. When the pit is full the topmost layer is well salted, the whole then covered with boards, or a well-fitting lid, which has a quantity of earth laid above it for the more perfect exclusion of the air. The grass speedily heats and ferments, and after the lapse of about six days, the whole has sunk to about one half its original bulk, when the lid may be removed and the space filled with fresh grass. When thus fermented, the grass has the appearance of having been boiled, has a sharp, acid taste, and is greedily eaten by cattle. The pits should be kept covered for at least six weeks, after which they may be opened successively as required, and may be kept open till their contents are consumed, without suffering any injury from contact with the air. One experimenter says, that by giving only 20 lbs. a day of this salted fodder, along with chopped straw, he kept his cows in condition during the whole winter; another states that, on a daily allowance of the same quantity, his cows gave a rich and well-tasted milk.

We commend the above extract to a careful perusal, and instead of sneering at experiments (even supposing them to be carried to an immoderate extent) we wish gentlemen were more in the habit of making and recording them, successful or unsuccessful, as in the latter case they will at least be a beacon of warning to others. Professor Johnston, of Scotland, proposes the following:—

1st. What weight per day of green food, newly cut, is necessary to keep a full-grown animal in a given condition? 2d. What weight of the same green crop, cut in the same state, is necessary, when preserved moist and salted after the German method above described? 3d. What weight of the same grass, when made into hay, after the quick or English method? 4th. What weight, when won after the protracted Scotch method? 5th. What relative weights when in the state of newly-made hay in August, of winter-hay in January, and of old hay in the ensuing summer?

LARGE CONSERVATORY.

Mr. Valk, of Carolina Hall, Flushing, Long Island, has recently erected one of the largest conservatories to be found in the United States. It is 25 feet wide, 21 feet high, and 180 feet long; with a glazed span roof running nearly north and south, and 3 feet of perpendicular glass in the walls, rising from the ground 3 feet. The architecture of this magnificent conservatory is extremely tasteful, light, and airy; and yet, unites in it great strength. We had a sketch of the same, but the artist having failed in doing it justice in the engraving, we do not insert it. Without the conservatory, on each side, is a border 12 feet wide; from the edge of this, near the walls, choice grape vines are planted, which lead through holes left for the purpose, and are trained up the roof on wires inside. At the sides, within, are shelves running all round the walls for potted plants; in the centre is a trellised arbor, over which are trained apricots, nectarines, and early peaches. This is a new feature, which we have no recollection of before observing in a conservatory; but we have no doubt of the success in growing fine fruit in this manner, and as it is a great economy in room, we wonder it has not before been resorted to. In addition to this, Mr. Valk has other conservatories of smaller dimensions, and a very fine garden. His son, Dr. Valk, sailed for Europe last April, on an amateur horticultural expedition, and with a view also of procuring stock for this conservatory. He will probably return as early as August or September. He was accompanied by Mr. Robert Parsons, of the firm of Parsons & Co., who have such extensive nurseries and gardens at Flushing. We have no doubt that these gentlemen will be highly entertained and instructed in their tour, and come back richly laden with information beneficial to the horticulture of their country. We could wish that such expeditions were more often made by our intelligent citizens.

NEW YORK FARMERS' CLUB.

At the meeting on the 4th of June, Gen. Johnson in the chair, a communication was received from Mr. Barbour on the present flattering prospects of the silk culture.

Mr. Sharwood, of England, presented quite a variety of seeds for distribution.

Dr. Ackerly, of Staten Island, communicated to the club his practice in agriculture on his farm of one hundred and thirty acres, particularly as to *compost and muck*. It was referred to the publication committee.

Poultry.—Col. Clark gave an account of a large poultry establishment he visited in 1819, at Wilmington, Delaware. The owner supplied the Philadelphia markets on a large scale; his plan was, with large moveable fences to keep his fowls enclosed, and he plowed up the enclosed ground frequently, and changing his yard, planted the one left with oats—his fowls fed on it. He had twelve hundred, or perhaps fifteen hundred fowls in excellent condition. They flourished in the plowed ground and oats, and by change of the ground; he had comfortable, thatched sheds for them. It was a profitable business.

Mr. Hodge.—Poultry running in wheat fields render a valuable service, and become fat; they destroy great numbers of grubs and insects, and do no harm to the grain, and I even think that it is benefited. The fowls produce more eggs too. How valuable are the races of our little migrating birds, giving us most delightful music, displaying their graceful forms in the air, and engaged constantly in destroying myriads of noxious insects! Dr. Harris, in his treatise on insects, states that a single pair of bluejays, having five young ones, consume two hundred grubs or insects per day; this would be twenty thousand in three months nearly. Suppose, what is probable, one half of these are female, each of which lays about two hundred eggs, then the two jays and their young destroy in one season about *two millions*. Our wanton destruction of the small birds ought to be stopped.

Carbonate of ammonia will drive off caterpillars and the green fly. I have applied the solution of it to plants by means of the syringe (adding one gallon of water to two ounces of the carbonate of ammonia); but worms do not mind it at all. I here exhibit the span worm with a solution put upon it. It disregards it.

Destroying Insect. Mr. Hodge.—In France and Belgium the farmers are fined *for not killing noxious insects. It would be better to give to children so much a quart for them!* The proper time to attack them is when they collect in their nests. As to this span worm, he is easily shaken off a tree.

Mr. Fleet.—Mr. Harvey, the landscape painter, hung on his trees large mouthed glass vessels partly filled with honey and vinegar, or with molasses and vinegar. These vessels caught chiefly in the night, large numbers of insects of great variety of kinds. It is a good practice!

Mr. Townsend.—I have three beds of cabbage plants. I burned their surfaces. I have one which I have treated with *poudrette*. On the burned bed I added ashes. In some spots of this bed insects are on the plants, while on my *poudrette bed* no insect is to be seen; but the plants are very fine and vigorous. These plant beds of mine were all sowed at the same time, and in all other respects treated alike.

Mr. Holmes.—A friend of mine makes a *mop*, dips it in spirits of turpentine, and applies it to the nests of the worm, and it kills them.

Mr. Brown.—Guano has been found good for destroying vermin by fumigation. Also sulphur, tobacco, and red pepper seed.

Col. Clark. Insects abound in earth, air, and water. Many of the races are carnivorous, devouring other insects. Many open little sluices in the soil, conferring on the farmer a benefit analogous to the celebrated modern process *sub-soiling*.

STIRRING THE GROUND IN DRY WEATHER.

This and the next month are those in which we usually have our most severe droughts, and where irrigation can not be resorted to, there is nothing like frequent stirring of the earth to obviate its bad effects. This in light soils, which suffer the most, is always easily effected; the best time for the operation is early in the morning and toward evening, when the dew is on the ground. The most perfect instruments for this purpose, are, the cultivator with five double mould plow-teeth in it, followed by a triangled harrow of a proper width for the rows of whatever crop it is to be used among, full of fine sharp teeth made as long as the utmost depth to which they can penetrate the soil. The philosophy of frequent stirring the earth to obviate a drought is so fully explained at page 78, Vol. I., that we need not again soon repeat the observations then made.

SHOW OF THE AGRICULTURAL, HORTICULTURAL, AND BOTANICAL SOCIETY OF JEFFERSON COLLEGE.

I sit down to give you a brief report of our spring agricultural show, which came off yesterday. We have had a very interesting meeting, and the attendance, all things considered, was very full indeed. Several other calls of interest occurred, unavoidably, on the same day, in our neighborhood, drawing off a great many; and the roads are insufferably dusty, from the long, severe and ruinous drought we have had, and still have. Nevertheless, *we who do the work* have great cause of complaint to make, that on a subject of such vital importance to their interests, as *improvement in all things agricultural*, planters show so much apathy. On the occasion of a very interesting trial of the comparative merits of a number of agricultural implements, which occupied a committee appointed for the purpose, during two hours in the morning, there were but some fifteen or twenty planters on the ground! But, from the many expressions of regret, which I have since heard, for non-attendance, when it became known how much of exceeding interest they had missed, I am confident that at the October trial, we shall have *a crowd*. It is upon this part of the exhibition that I have most to say, as my time and attention during the day, were too much taken up to give the stock and other things more than a cursory glance. I will forward you papers with the reports of committees at length,* and pass on with the remark, that the number of cattle and horses was, I thought, fully as great as at any previous meeting, some of them being remarkably fine.

Of bulls, Mr. Hall had a very handsome two-year old white bull, which in my estimation rated *first*; he is a compact, well-made animal, and *handles* well. Col. D. Cooper, from Wilkinson county, exhibited an aged bull which I must place *next*, even over the head of Mr. Hall's mountain of beef, Belizhover—in my opinion there is no comparison between the two animals, though I know that I could find few *here* to side with me. There were also two younger bulls, the property of Samuel Chamberlain and D. P. Jackson, that were very fine. Of sheep and hogs, the show was a poor one; every one being, like myself, afraid of the excessive dust. Col. Wailes exhibited a pen of very good sheep. In vegetables and flowers too, we were sadly wanting—caused by our long drought. Col. Wailes, the Rev. Mr. Whielden, and Dr. Butterfield, occupied one of the college halls with their fine cabinets of stones, minerals, fossils, &c. Col. W. has a most valuable collection, particularly of agates, madrepores, cornelians, &c., and of fossil and Indian remains. Mr. Whielden exhibited a miniature cage, of broom-straw, in which were some dozen silkworms in the act of enveloping themselves in their silken covering, by them lay a number of others, in different stages of growth, feeding.

But to the implements. At about nine o'clock, the committee commenced operations on a piece of ground here, on Ingleside. From the printed report you will see what plows, &c., were on the ground, and also the opinion of the committee, which you would oblige many here by publishing,† and confer too a more extensive benefit upon your makers of such things, if they will act upon it as they ought to do, than they are probably aware of. From the opinions there given, I must beg leave to differ somewhat. The fact is, we know so little here of how implements of cast-iron answer the purpose, that there is a strong prejudice against them, which, however, would quickly give way to conviction. Ruggles, Nourse, & Mason's plow is a very large and heavy implement,‡ my objection to which I will give presently. It turned over a regular furrow of from 12 to 13 inches, by 6½ inches; while the two others that were tried turned only about 8 to 9, by from 4 to 7 inches. In my opinion the teams *did not* exert themselves more with the eagle plow than with the others, and the hand had not half the work to do—then see the difference in the amount of work done. The ground was very dry, and had been much trodden, yet the eagle plow laid it neatly over, covering up the weeds completely, and leaving the ground well pulverized, and ready for any kind of crop; while the other plows ran very unsteadily, giving the plowman much to do, and turning over a very irregular furrow, throwing up the ground in large clods, gouging them out, as it were. Wood's plow has been many years in use here, and gives universal satisfaction, doing excellent work when the ground is in fair order; and they are light, strong, and cheap, costing $6, to $7 and $8. But when brought beside this excellent Boston plow of Ruggles, Nourse, & Mason, it was completely left behind, so much so, as to open the eyes of all present. One of the committee remarked, that though he had been a farmer all his life, he had learned more of plows and plowing during these two hours than he ever knew before! There is no necessity for our plows and other implements being so strong and heavy as with you—we have no stones. Then our teams are lighter—the weather greatly hotter, so that animals can not stand so much. We are almost all too short of team, and of consequence have, at times, to work them too many hours. But I will go more at length into this matter in an article I have nearly ready for you, on *Implements for the South*, with rough sketches of some of my improvements. Our plows, however, want *length*, to give them *steadiness*.

Let Ruggles, Nourse, & Mason, and others of your best makers, including Prouty & Mears, and Barnaby & Mooer, send to our fall Show some plows made for the south, and such as they can furnish us with here at fair rates (my side-hill plow cost me here $18,50, Ruggles & Co.'s with coulter and wheel, $13) and they will open up for themselves a good market. We are tired of sending for implements without first seeing them. If they will forward them from Boston, they will come to the society free of charge, (see report.) Let them consign them to Wm. I. Minor, Esq., our president, and have them reach us by the middle of October, and they shall all have a fair trial, and will afterward be sold by the society, and the money remitted to the owners, or disposed of otherwise as may be ordered. Is there no possibility of sending us a correct dynamometer at same time? If there is, let me know the cost, and the society, or some of its members will remit you in time to send us one. If the owners of the plows so desire it, they will be forwarded to shows in the adjoining counties of Jefferson and Wilkinson, and exhibited there also. THOMAS AFFLECK.

Ingleside, Miss., 27th April, 1844.

POLLED GRADE DURHAMS.

I WISH to return you my thanks for the information you have vouchsafed me in your May No., but must ask your forgiveness if I do not attach implicit faith in the purity of the strain of any $\frac{31}{32}$ or $\frac{7}{8}$ blood Durhams without horns. I don't mean to impeach your veracity, or to deny the possibility of such a phenomenon; but when we consider that for an animal of the higher grade named, *five* generations, and at least fifteen years, must have intervened from the the first cross, I think it more likely, unless the instances spoken of by you were bred under your own eye, or of equally experienced professors of the art of breeding *in all its branches*, that some clandestine irregularity may have occurred to stamp the progeny with the deficiency in question.(*a*) I am aware that the Short Horns have a touch of the Polled breed; but it is far back, and would have shown itself more generally than we find to be the case, if there were so strong a tendency in the cross to show itself, as one might be led to believe from your assertions: at any rate, its occasionally happening must constitute an exception and not the rule; you are not thereby justified in deciding, *ex cathedra*, upon bare inspection, that a Polled cow was three quarters Durham, of whose parentage nothing was known. You have not communicated to the public upon what grounds (other than the want of horns) you based your opinion; if you have any other we should be obliged to you if you will state them.(*b*)

---

* We received these papers, but they have unfortunately got mislaid, which prevents our giving a synopsis of the reports.—Ed.

† This we have never received, and shall be quite obliged if Mr. A. can yet furnish it for us.—Ed.

‡ Since the reception of this report we have forwarded Mr. A. smaller plows of Ruggles, Nourse, & Mason's manufacture, which we are certain will please him, for a single mule can draw with ease the smallest one we sent. Ed.

Besides, there is a well-known tendency in the Galloway with which Mr. Collins crossed his Short Horns, occasionally to produce diminutive horns; showing that the probabilities are altogether against any Polled animal being of three-quarter or any higher grade of Durham blood.(*c*)

"Put that cow in good condition," you say, "and to our eye she would be anything but a raw-boned animal." This sounds very much like admittance of the very error you reprobate, that of judging cattle not by their *anatomy* but their *condition.* Would she be *less raw-boned* if she were put into good condition ?(*d*)

The mode of proof I should propose would be of a directly contrary nature, and the scraping the flesh *off* the bones would, I presume, be a better test of their fineness than putting flesh on. As you undoubtedly include your humble servant (*e*) in the number of those who pronounce such "very erroneous decisions upon stock at our agricultural shows," and who think "a lean beast must be raw-boned and coarse, and a fat one fine, with *smooth* bones," you will pardon me for saying, that the error I have fallen into, if it should prove to be such, may have arisen from my unconsciously drawing a comparison in my own mind, between the frame of the cow Emma and those of certain grade Durhams in my own yard, without waiting until they were put into good condition.(*f*)

Our relative correctness on this point may, however, be put to a strict test by *actual admeasurement* of the highly valuable creature referred to, and then contrasting it with that of bona-fide Durhams, or cattle with avowedly fine bone.

When this point has been satisfactorily settled, it will then be time enough to look round for those "cows of the ordinary Polled breed, with," as *you make me* say, "forms as good as Mr. Schenck's cow;" until then we should hardly agree as to what were so.

JOHN W. KNEVELS.

(*a*) Our authority on the point in question, was derived from an English breeder of the highest respectability, one who kept a regular record of his animals, whether grades or thorough breds, and we have no more doubt of the fact than if we had bred the one we had reference to ourselves, and all its ancestors. Nothing is more common in the Smithfield market, in London, than half to three fourths and seven eighths grade Durham bullocks, descended from the black Polled Scotch cow; and yet the color of these grades is more generally all black, and they are usually without horns, or merely show the smallest possible apology for horns, short stubs occasionally, hung loosely to the head by a stringy integument not much thicker than the skin.

(*b*) Even allowing an "exception," we (that is, the writer of these remarks and the one who was with him, an English breeder of much experience) think our judgment quite as correct in supposing Mr. Schenck's cow might come under this category, as Mr. Knevels, that she might not. We at least are *two* to one thus far in the matter, and according to the principles of the government under which we reside, *our authority* must be decisive. This last expression is *badinage*. But as it is a mere matter of opinion, in which either party may be right or wrong, we shall not argue the point. If Mr. K. will turn to our second vol., p. 270, he will find the "grounds" upon which our "opinions were based" expressed in full, viz., "a good spread of hip; long head; low, deep brisket; handles well," &c., &c., all marked characteristics of the thorough-bred Durham, which no other breed of cattle possesses in the same eminent degree. My own opinion, and that of my friend with me, were not expressed till after handling Emma pretty thoroughly, and scrutinizing her in every point, and talking the whole matter over minutely between us, and this opinion the public can take for what it is worth and no more.

(*c*) To all this we can say, that facts which we have not space to relate, are entirely against the "probabilities."

(*d*) By "raw-bones" we understand Mr. K. to speak in the popular but erroneous acceptance of the terms, *coarse-bones*. We will therefore take this correction, and say, that when the bones of an animal are thickly clothed with fat and flesh, they do appear relatively finer to the general eye than when "raw," or, in other words, when the animal is in poor condition. We endeavor, now, in forming our judgment as to the coarseness or fineness of an animal's bones, to divest them in our mind's eye of all flesh, and regard them relatively in their nakedness. Under this phase we consider Mr. Schenck's cow a medium animal as to fineness of bone.

(*e*) We regret that Mr. K. should suppose us personal in our allusions; we meant to be understood as speaking generally; and if he will reperuse the passage, with its context, we think he will be convinced of this assertion.

(*f*) If Mr. K. has better grade Durhams than Emma, we are happy to hear it, and shall want no other evidence in saying that his stock must be a choice one: and, to conclude, we shall be ready any time to take a tape line in hand, and go on a *measuring expedition* with him. By so doing, we are certain that we should be placed in the way of hearing much shrewd observation, and acquiring some good lessons on the subject of stock breeding.

REVIEW OF MR. DANA'S GEOLOGY OF SOIL.

The most striking effect on the mind in perusing Mr. Dana's Muck Manual, is the manner in which he assumes deductive facts at will, and his dogmatic mode of forcing them on the reader, without in any instance offering a reason for his bold assumptions.

At page 7, he asserts, that "however named and classed are the rocks of the earth's surface, they have one common origin, the molten-matter of the globe. Hence, having a common origin, their ultimate chemical constituents are similar."

What says Buckland?—"Geology has already proved by physical evidence, that the surface of the globe has not existed in its actual state from eternity, *but has advanced through a series of creative operations*, succeeding one another at long and definite intervals of time." Page 20, vol. 1st.

Mr. Dana, page 9, says, "The chemical constitution of all rocks is similar." Again page 10, "The trappean and fossiliferous rocks contain the most lime and magnesia; the granitic and non-fossiliferous, the most silex. The amount of this difference is about from four to seven per cent.; yet notwithstanding this, the general chemical constitution of all rocks approaches so nearly to identity, that this may be laid down as the first principle in agricultural chemistry, *that there is one rock, consequently one soil.*"

We must infer from this, that the chemical constituents of granitic and calcareous rocks are the same; and also that the same soil will be produced from the debris of the two rocks. I need not point out to any chemist, mineralogist, or geologist, the absurdity of such an unwarranted assumption!!

Mr. Dana goes on to assert, page 10, that "to the farmer, all soil is primary. The question then arises, how do rocks and soil affect vegetation? As a consequence of the first proposition, it may be laid down as the second principle of agricultural chemistry *that rocks do not affect the vegetation which covers them.*"

The first proposition is evidently absurd, that "all soil is primary;" but if true, what connexion is there between this and the deduction, that "rocks do not affect vegetation?"

In answer to this unsupported assertion of Mr. D., I would ask him, why the soils covering limestone rocks are in all countries the most productive? Sir Humphrey Davy says, "The productiveness of soil must likewise be influenced by the nature of the subsoil, or the earthy or stony strata on which they rest, and this circumstance ought to be particularly attended to in considering their chemical nature, and the system of agricultural improvement."

At page 21, Mr. D. makes the following remarkable and extraordinary assertions!! "The same uniformity of chemical composition characterizes soil, which characterizes rocks; that is great similarity, but not identity, and it is on limited patches only, that soil partakes decidedly of the character of the underlaying rocks."

"The extensive analysis of soil, executed by the geological surveyor of Massachusetts, taken from every variety of rock-formation, presents a remarkable uniformity, both of chemical constitution, and mineralogical composition of the earthy ingredients. The same truth is presented by the analysis of soil from various parts of the globe. *It is a conclusion, warranted by the widest examination,* that the mineral constituents of 100 parts of the soil of our globe, is composed of sand or silicates 89.28; salts of lime 00.85."

The extracts I have made afford a fair specimen of Mr. Dana's reasoning in his geology of soils. It is throughout a series of dogmatic assertions totally unsupported by scientific facts. Europe has produced many celebrated analyzers of soils, and their results are altogether at variance with Mr. Dana's positive assertions. Vauquelin was an analyzer of soils, and the process prescribed by him, in the Annales de Chemie, 30th vol., is the best which has yet been offered. Lowitz, Berthier, Berzelius, Dundonald, Kirwan, Young, Gay Lussac, Thenard, Davy, Tillet, and many others in Europe, as able chemists in our own country, have been analysers of soils, and not one of them ever gave such results as appears in Mr. Dana's geology of soil.

I shall quote three results of analysis of soils, two by Sir H. Davy, and one by M. Tillet, all widely distant from each other. Sir H. Davy remarks that "those soils that are the most productive of corn [grain] contain always considerable proportions of aluminous or calcareous (lime) earth, and most generally both, in a finely divided state."

"The quantity of calcareous earth is however very various, and in some cases exceedingly small. A very fertile corn soil from Ormiston in East Lothian afforded in a hundred parts only eleven parts of calcareous earth; the finely-divided clay amounted to forty-five parts."

"A soil from the low lands of Somersetshire, celebrated for producing excellent crops of wheat and beans without manure; I found to consist of 11 per cent. of sand, chiefly siliceous, about 70 per cent. of lime, about 5 per cent. of vegetable matter, and other minor ingredients."

The most productive soils around Paris, was found by M. Tillet, "to be composed of 36 per cent. of aluminous clay, 24 per cent. of river-sand, partly siliceous, and 37 per cent. of limestone."

Here we have correct analyses of productive soils from Scotland, England, and France; the first containing 11 per cent. of lime and 45 alumina; the second requiring no manure, about 70 per cent. of lime, and the third more than 36 per cent. Yet in the face of such high authority, Mr. Dana decides that "in the mineral constituents of 100 parts of the soil of our globe, there exists but a fraction of one per cent. of lime." As he obtained his information from the analysis of the soil of Massachusetts, we can no longer be surprised at the sterility of that state, and at her having to buy the principal portion of her grain from more favored states.

Mr. Dana admits that limited patches only of the soil of the globe may partake of the character of the under laying rocks. Such admission is not required to disprove the positions laid down by him. Without knowing anything of geology, it must be evident to the most unscientific observer that Infinite Wisdom did not place such immense layers of carboniferous rock, covering the face of valleys and mountains of more than half of the surface of the globe, without designing it for beneficial purposes. The sun and air decompose such rocks on the surface, the rains wash off the parts decomposed, carries it into the valleys, where it mixes with various other matters, and the carbonic gas supplies vegetation with more than 60 per cent. of its food. If only a fraction of one per cent. of lime were found in the soil of the globe, then must the evident wisdom and benevolence of the Supreme have been overruled. As this is impossible, the probability is that man has misinterpreted his operative action.

Even granting the absurd theory of Mr. Dana, that "there is but one rock and one soil," his analysis of that rock and soil is anything but correct; and if he obtained his information from the geological surveyor of Massachusetts, then must we decide that the surveyor was, to say the least, a very incompetent analyzer. Mr. D., page 8, classifies the primitive rocks, as granite, gneiss, sienite, greenstone, porphyry, basalt, &c. Let us see whether these rocks afford 89.28 silex, and only 85 of one per cent. of lime.

Primitive granite is composed of silex, 68, alumina 14, lime 2.33, potash 9. Granite is composed of silex, mica, and felspar, and the above analysis is taken on the supposition that each are in equal quantities, but it is well known that the felspar is generally the predominating material, which would lessen the proportion of silex materially, and increase the alumina and lime.

Gneiss contains much less silex than primitive granite, more alumina, and more oxide of iron.

Sienite is distinguished from granite by the presence of hornblende—this mineral contains 42 silex, 12 alumina, 11 lime, 2.25 magnesia, 30 oxide of iron. Red felspar is the predominating material in sienite—components 62 silex, 17 alumina, 3 lime, 13 potash.

In greenstone the hornblende predominates, silex and mica are rarely found in it; the felspar is in this mineral always green or greenish. See components as above.

Porphyry is a compound rock, varying much in its base and in its mineral structure, containing quartz and felspar in a crystalline state.

Basalt varies much in its properties, it gives from 42 to 56 silex, from 15 to 30 alumina, from 8 to 10 lime, and from 8 to 25 iron.

In my next I shall review Mr. Dana's chemistry of soil.

Wm. Partridge.

PROFITS OF POULTRY.

I noticed in the last number of the American Agriculturist, some queries propounded by a correspondent over the signature of "H. C. M.," in regard to the profits from, number of eggs obtained, and amount of food consumed by a given number of fowls per year.

Now, sir, in the first place, I would recommend to your correspondent to try the experiment himself, even if it be on a small scale, say from 12 to 20 fowls. Keep an accurate account with them, charge the cost of the fowls, the food they consume, and all expenses attending them. Keep an accurate account of all the eggs obtained, all the chickens raised: and at the end of the year credit the eggs, and the stock on hand, and the queries will be answered. But, as he probably wishes to avail himself of the experience of others, and jump into the business at once, I will endeavor to gratify him by giving the result of some of my experience.

When I first moved on to my farm, I kept about 100 fowls, which were allowed to run and roost where they pleased, annoying me in the garden, destroying my grain, and soiling my implements, and from which we did not obtain over 1000 eggs and about 60 chickens, during the year. I then built me a poultry-house, and enclosed about one fourth of an acre of ground with a picket fence, between six and seven feet high, placed the fowls in it, and commenced keeping debit and credit with them. In six months and seven days we obtained from 60 hens 2655 eggs. The year following, from the same number of hens we obtained over 4000 eggs.

Hens that are well fed, and attended will average about 90 eggs each per year; and they will consume about 38 quarts of grain, in proportion as follows, per head, in the same time.

The amount consumed within the year, of the different kinds of grain, was

91	bushels of	wheat-screenings,	21 c.	$19,11
6	"	rye,	62½	3,75
11	"	millet,	62½	6,87½
2	"	corn,	56¼	1,12½
3	"	barley,	50	1,50
2	"	Indian meal,	100	2,00
115	bushels			$34,36
Amount of eggs and poultry sold was				56,79
Leaving a balance of only				$22,43

We were more fortunate last year, as will be seen from the following. Our stock consisted of 84 fowls including cocks; 3 turkeys, 7 geese, 2 ducks, and 2 guinea-fowls, which was of course much increased in the spring and summer by the young reared. They consumed

71	bushels	wheat-screenings,	15 c.		$10,65
4	"	millet,	50		2,00
14½	"	corn,	42½		6,17
30¼	"	oats,	24		7,26
8	"	potatoes, boiled,	25		2,00
127¾	bushels				$28,08
We obtained 4152 eggs, average 1 c.				41,52	
	80 fowls, sold for			47,15	
	32 bushels manure, sold at 18¾			6,00	94,67
			Profit,		$66,59

These fowls were confined in a yard and allowed as much grain as they would eat, it being kept constantly before them, changed often, and in the winter boiled potatoes were fed to them warm, and occasionally animal food. They were plentifully supplied with lime, gravel, and water. Some allowance, however, must be made in regard to the amount of sales, as many of the fowls were of fancy breeds.

Persons living near a city or village, will find poultry to pay much better than those living at a distance, which, in a measure, will account for the difference of opinion in regard to the profits arising from them. Then again, in the hands of some, they will be made profitable, while in the hands of others they would be a losing concern. Much depends on management; and I contend, that with proper management, and favorably situated, fowls can be made as profitable, according to the capital invested, and labor employed, as any other branch on the farm; but like all kinds of business, to be successful, it must be attended to. In raising or managing poultry, as with most other things, a *little experience* is worth more than a *great deal of theory.*

Where eggs is the principal object the Poland, or crosses of the Poland, are undoubtedly the best, as they very seldom want to set. I consider it most profitable to sell the eggs when high, and let them hatch when the price is low.

On many accounts, and in favorable situations, geese can be made profitable. They will live on grass in the summer without grain, their feathers are valuable, and their carcass, when young and fat, will command a fair price. But to counterbalance this, unless confined to a single pasture, they are not only troublesome but destructive to grain or grass in meadows. In order to obtain a good crop and the best of feathers, it is requisite that they should have a stream or pond of water to resort for washing, &c. C. N. BEMENT.

Three Hills Farm, May, 1844.

THE CULTURE OF TOBACCO.—NO. II.

TOBACCO requires for its successful cultivation two conditions—an abundant supply of proper saline matter, and secondly, a sufficient source of ammonia.

In the mineral earth the former condition may be present, but the second as long as the soil is untouched is absent. The saline matter is however but very sparingly dissolved, while the plants require a large supply, and especially during the earlier periods of growth. The indications are therefore clear enough, and may be expressed under three heads.

1st. To pulverize the soil, or give it porosity.

2d. To hasten the solubility of the necessary saline substances.

3d. To secure a supply of ammonia.

1st. *To pulverize the Soil.*—When it is adhesive and wanting in porosity, it must be rendered fine. This may be accomplished by many means, in different localities. If lime is abundant, and the land a stiff clay, it should be used freely, drainage may be necessary, admixture with vegetable matter, as leaves, sawdust, muck, fallowing crops, burning clay, repeated stirring, rolling, &c.

By pulverizing the soil two important points are attained: First, the greater absorption of gaseous matter, dew, and fluids from the air: and secondly, the means of dissolving saline matters are increased. Beside these advantages, the plant is enabled to draw food from a much greater extent, and the improvement, if properly made, is a permanent advantage to the land.

The absorption of gaseous matter is increased to an extent directly proportional to the fineness, and looseness of the soil. This requisite to fertility is certainly appreciated by many farmers, but there are none who are fully alive to its capabilities. So much may be accomplished in agriculture by attending to this one point that it may be made the first, and only principle of successful farming, provided the mineral composition of the earth is suitable. Every one is now aware that plants will grow and flourish in charcoal-powder watered with rain-water, sufficient saline matter being present. Yet the charcoal, properly so called, independently of the bodies which adhere to it, furnishes no part of the food of plants, not so much as the clay of the field. It acts in consequence of its extraordinary porosity in absorbing and holding a sufficient amount of the carbonic acid, and ammonia of the air, to answer the necessities of the most luxuriant vegetation. Its action is undiminished for years so long as it is in contact with air. There may be a slight difference in the proportions of gaseous matters which clay absorbs, when compared with charcoal, but leaving that out of consideration, it may be proved that if the clay of the surface-soil could be reduced to the same condition of porosity, it would perform the very same office as charcoal, and constitute in itself a sufficient material whereon the most luxuriant plants might be raised, provided as before the necessary saline matters were present. Common clay can not be brought into this state of maximum porosity by mechanical means, for it differs from charcoal in its intense cohesion for water: but when it has been burned, this point of difference is destroyed and the two now resemble one another very closely in this physical property, and are equally known, as well as coal-cinders which act in the same way, as fertilizing agents.

The doctrine advanced is not new, the indefatigable Jethro Tull, as the result of mere experience, wrote on it, and secured among other illustrious disciples the name of Duhamel. Liebig applying the measures given by Dalton for the absorbent power of box-wood charcoal, and which are very far beyond an expression of the real absorption by pine charcoal exposed to moisture on the open field, was the first to account for one feature of the advantage gained by pulverizing the soil. But neither he, nor any other writer on agriculture, has alluded to the fact, that dissimilar soils absorb unequal quantities of the components of the atmosphere. This is a topic of great importance in practice, and should be submitted to rigid experiment. From this investigation will appear the reason why certain iron-stone lands and fine clays are so decidedly superior to loose sandy soils. It leads also to the conclusion, that an addition of barren sand to clay is injudicious on the whole, for the same expense directed to burning the surface, or turning in green fallows would lead to much more real advantage.

It may be urged by my readers, that one of the facts, previously so much insisted on, proves of no consequence here, or that there is a contradiction between the statement now made, *that enough carbonic acid and ammonia can be obtained from the mineral earth to support luxuriant vegetation*, and the previous assertion, that a certain class of plants are to be found only on soils rich in vegetable matter. There is however no contradiction, but a truth of great interest to the farmer involved in these facts. They are both practically correct, both made the basis of successful agriculture in extensive districts of country, and both lauded to the skies as the true method of culture. As a proof I refer the reader to part I., vol. 4 of the Journal of the Royal Agricultural Society, he will find, beginning at page 267, an account of the practice of paring and burning resorted to in the Roothings District of England, with its great success. Here are farmers laying down land to meadow, for the purpose in a few years of breaking it up to burn, when it has accumulated vegetable matter; and when other equally intelligent farmers would consider it in a fine condition to turn in as an improvement to the land. Both are right in their practice, there may be a difference in expense, which I will not now consider, but both operations, although come at as the result of experience, and of great antiquity, are yet founded upon the very *same scientific principle and accomplish the same indication.*

Again, we learn by the result of the foregoing practice, as well as from investigations with charcoal, that those plants such as tobacco, Jamestown-weed, wheat, &c., which do not draw sufficient nitrogen from the air for luxuriant growth, may be abundantly supplied in a highly porous soil, solely of mineral earth, without humus. That decaying vegetable matter is not to them food, but only the gaseous bodies which they yield by decay, that the same gases absorbed by certain porous minerals from the atmosphere are adequate to their development.

The farmer, therefore, is put in possession of an important principle, which may be satisfied by very dissimilar practice. He learns that vegetable matter is unnecessary to fertility, where his soil is sufficiently ameliorated by burning for increased porosity, or that if burning is improper, as in sandy and lime-stone soils, he can secure the object aimed at by impregnating the land with vegetable matter or adding charcoal or burnt clay from elsewhere.

But the pulverization of the soil does not improve it merely in a mechanical sense, there is another great advantage gained. It assists in a very important manner in attaining the great object of increasing the amount of saline matter rendered soluble. I here disregard all consideration of porosity, and suppose the mineral earth as reduced to an extremely fine powder, or at least offering an immense amount of surface if not in fine powder. A highly porous substance, as charcoal or chalk, does not expose to the air merely its visible superficies, but every pore and cell presents its sides and cavities. It is this extent of actual surface which I am considering, and not the mechanical size of the particles, although it is possible to attain immense surface by reducing them considerably. In the loose, friable soil, saline matter is rendered soluble much more rapidly than in the adhesive and hard masses. For, as is well known, the surfaces of solids increase in a much higher progression than their diameters. The smaller therefore the particle, or the more porous the structure, the greater the extent of surface exposed, and the larger the quantity upon which the carbonic acid water and other solvents can act. Much more water is held by such land, and with the gaseous substances always present, the greater the rapidity with which saline substances are dissolved. With respect to burnt lands there is an additional advantage which is of a chemical character, viz: the facility with which certain silicates are dissolved; on this topic however I may treat hereafter.

The science of agriculture is not so transparent an affair as many persons suppose; it is not the perusal of a theoretical treatise that is sufficient to convert the tyro into a sage. Even Tull, who, albeit without much science, was an exceedingly good observer, fell into a lamentable error when he supposed that friability of soil was the only essential to fertility. There are soils with a maximum fineness which are defective. I have had during the present summer, an opportunity of meeting with a very striking case, in a specimen submitted to me for analysis by R. L. Pell, Esq., which was so remarkable for its fineness, that on showing it to an experienced farmer he pronounced it extremely fertile; yet it was barren in consequence of the want of lime, as was developed by analysis. Therefore we repeat, that the necessary saline matters must be present.

So contradictory is the practice of paring and burning to the more common method of accumulating vegetable matter in the soil, that those farmers who have never adopted the former are incredulous about its expediency. In the first, the vegetable matter accumulated by grass roots is made the fuel; in the ordinary method, the same organized substances are treasured up as the great acquisition of the farmer. It is in consequence of turning so much attention to one only of these processes that Liebig and Boussingault respectively, have advocated theories of agriculture so dissimilar.

Liebig, in his last work, lays down the doctrine that saline matters are the true and only fertilizers; while Boussingault, impressed with the great advantages of ammonial substances, declares that the value of manures is directly as the nitrogen they contain. These views, so discordant, are nevertheless the expressions of the culture of different countries. While the husbandman of Flanders and China knows nothing in nature equal in fertility to urine, the Egyptian dresses his soil with the *ashes only* of camel's dung, or to bring the practice more clearly before our ideas, he burns the stable manure for the sake of the ashes. In the same way, in Europe, more especially in the British isles, vegetable matter of the soil is burnt and the ashes only retained. Both these national practices are successful. In the opinion of the people of Flanders, Liebig is wrong and Boussingault right; in Egypt Liebig is right and Boussingault wrong. These dissensions are unfortunate. Agriculture as an art, has been the centre of the most contradictory notions; but science admits only of one true theory. Both these eminent men have erred in seizing upon one fact as the basis of a doctrine. There can be no question that the Flanders husbandry is right, so far as common farming goes, because it is successful—nay, there is no doubt that if those people were to burn the excrementitious matters they use, they would destroy their prospects. That is to say, if they adopted the one principle of Liebig they would ruin their fortunes. On the other hand, if the man of Egypt should pay for the *nitrogen* of fresh camel's dung, he would be making a bad investment. These men till different soils: that of Flanders is sandy, loose, but not naturally friable; it filters off water, but does not absorb and retain atmospheric gases. In Egypt, the soil is made from the annual sediment of the Nile; nothing can be finer, more friable, more porous.

Both Liebig and Boussingault have erred in laying too much stress upon one condition of fertility; you may read their works without supposing there is any other than that laid down by either. But there are two essentially distinct and essentially important principles in the cultivation of such plants as tobacco and wheat.

1st. The presence of saline matters.

2d. The presence of ammonia, &c., in the soil, either in virtue of an abundance of decaying vegetable matter, or by reason of the porosity of the soil.

This long digression will now appear not unnecessary. As a writer in a journal which passes into the hands of planters cultivating very dissimilar lands, I could not recommend a proceeding only suitable to a limestone soil; and as a scientific man, I would not allow myself to fall into the vulgar error of laying down one plan of improvement as suited to all which was in truth proper only to a specific tract. Let me be well understood: the two principles laid down, if correctly apprehended, point out the method of treatment to be pursued in every case, but I leave the question of expediency and profit to the farmer; he must decide whether, to attain the second desideratum, he will burn a stiff clay, or fallow, with clover; both will answer the end, but the former is more durable, for a good burning will show its effects for seven or more years. In sandy tracts we may improve by fallows, charcoal, &c., but can not by burning, which increases the looseness of the soil. Limestone lands must not be burnt, for obvious reasons. D. P. Gardner, M. D.,

Lecturer on Agricultural Chemistry.

New York, June, 1844.

CULTURE OF THE SUGAR-CANE.—NO. II.

Manner of Cultivation.—In Georgia the cane was cultivated differently from what it was elsewhere. It naturally took the course of our cotton culture of the seacoast; to wit, ridges at five feet apart; a trench was opened on the top of the ridge, three inches deep, in which a double row of cane-plants were placed, cut about two feet long, and placed so as the eyes which are alternate, should be on the sides, and then covered with two inches of earth. This you may suppose in a good season gives a continued line of stalks, not more than three inches apart, and throwing up cane five or six feet fit for the mill. I have often supposed that there was growing of vegetable matter to the acre, from 30 to 40 tons, certainly containing more nutritious matter for stock, than any other plant would give upon the same surface.

In Louisiana they planted altogether with the plow, and had their trenches not more than 2½ feet apart; they have since gradually widened their distance. When I was there, they used generally the old French plow, with a wheel at the end of the beam. With strong teams, they plowed deep and better than anywhere I had seen in the southern states. It was by means of the plow, that they planted so many acres to the laborer; and again, because they had little grass upon their river-lands except the nut-grass. This absence of grass-seed I have often wondered at; and at last, could only attribute it to the great distance at which the cultivated highlands were situated; so that the seeds that the winds or the birds might waft to the river, were swelled and burst, and lost their vegetative power before they reached the lower Mississippi, or sugar country.

The cane in Jamaica, (as we see in Bryan Edwards, and as I knew from two clever and educated men, who became my neighbors in 1809, and who had been many years agents and managers of estates in Jamaica,) was planted with the hoe; holes in lines two feet one way, and four the other, were dug two feet long, a foot wide, and a foot deep. Into this deep hole, six or seven short cuts of cane were placed, as much manure as their numerous mules and oxen, fed on the cane-tops and Guinea-grass could produce, was thrown in, and then two inches of earth dressed down. At every weeding, additional earth was drawn in, until, at the close of their cane-working, the land was again levelled, without the intermediate spaces being broken up. It took sixty hands to hole an acre, and at few plantations was there half an acre to the laborer of plant-cane; the rest of the crop was first year's ratoons, and sometimes two-year ratoons. In St. Domingo, the fields that were watered from the mountain streams, were sometimes ratooned for many years, giving for the product of these irrigated lands, one third more sugar than the lands of Jamaica, where there were few or no watered lands.

In India, in the interior country, lying between the Jumna and the Ganges, which is the sugar country of Hindoostan, they have a still more dilatory and extraordinary process; they plant in holes, but not so deep as in Jamaica, carefully manure and water sometimes by a well, drawing water by a bucket, either by a buffalo or with men; and lastly, when the soil is level, and the cane run up to near their height, they draw them together, wrapping their leaves around their collected stalks, to preserve them from blowing down by the winds that precede and follow the change of the monsoon. This cane is manufactured in the field where it grows, with no shelter for men or boilers, or the stone rollers with which they express the juice, but a tree. Yet they tell us, in the Asaiatic Register, published in Calcutta, in

India's better day, that with this rude but dilatory process, they made 4,000 lbs. to the acre; the sugar is, however, very bad. And if human labor was worth anything, and in any way voluntary, cane would not be grown, and sugar sent 2,000 miles down the Ganges, to be shipped to England, and there sold for 15 or 16 shillings per cwt. in bond. But the man has as little volition as the buffalo that draws his water, or turns his stone mill. Perhaps you may ask me, what do I say of the Mauritius? Fifteen years ago, every valley in the mountains of the island heard the roar of the water-mill; every plain had its steam engine; there was gladness and hospitality in every country hall; there was festivity, and commerce, and prosperity, in every port. But the spoiler and his mandate have gone forth from England; master and servant have been stricken down; all is misery and ruin, from one end to the other of the Isle of France. Nor is the day very distant when the owl will nestle her young in her engine houses, and her water-mills, and be only disturbed when the pirate returns from roaming the sea, to hide his spoils in the desolate and solitary places of the Mauritius, of Jamaica, and the Caribbee Islands.

The Manufacture of Sugar.—The process of sugar-boiling has greatly changed since I began to grow cane in the year 1806. At that time Jamaica produced the best raw sugar that was grown, a bright yellow, strong-grained sugar; it was preferred by the sugar refiners; they used Bristol lime or coarse marble in the clarification of the juices. The French of St. Domingo had generally used alkalies, which gave a lighter color, but a smaller and softer-grained sugar. Bryan Higgins, one of the Rumford school, at an expense of five thousand pounds to the colony, was kept in Jamaica for two years in arranging their boiling apparatus; his great object was the economy of fuel, as much of this was English coal. The boilers of Jamaica were of copper, and, as arranged by Bryan Higgins, consisted of two clarifiers, square, standing beside each other, with cocks in each, and upon separate flues of the same fire; so that while the fire was acting upon one, allowing the fecula to rise to the surface, where it formed a thick, leathery coat, this process was going on, while the other clarifier was filling from the mill. The juice in these clarifiers should not boil, but be brought to a simmer, and remain for a short time at 160 to 170 of Fahrenheit. When the fecula has apparently all risen, as the clarifier above the first boiler in the range contains as much juice as will fill the first boiler, the cock is turned, and the clarified juice is discharged into the boiler, the fecula subsides to the bottom; as the purified juice runs off, in an unbroken surface, and is then taken out of the clarifier, and the kettle cleaned for a renewed operation, while the other kettle beside it is going on with the same process, to be ready for a renewed charge for the evaporating kettle. At that time there was no means of determining the point at which the sugar would crystallize, but the negro boiler's eye, or the touch of his hand; for I never saw any manager from Jamaica who either knew the quantity of lime to be given, or when the process of sugar boiling should terminate; these matters were altogether left to the negro operator; for they had in use on the plantations neither the hydrometer, for determining the quantity of sweets contained in the cane juice, nor the thermometer, to tell when the process of boiling should cease. Both of these instruments were introduced by Mr. Constance, from France, into a refinery at New York—the thermometer certainly—and these instruments simplify the process greatly.

My growing cane and manufacturing sugar in Georgia, drew the attention of many persons at a distance; among others, Dr. Mitchell alluded to it in one of his books, and Mr. Pitkin in his work upon the statistics of the United States, and every one was disposed to lend me a helping hand. A friend sent me Beaumé's hydrometer, intimating that water was the unit. After hundreds of experiments, I ascertained that when the raw cane juice rose to 7 on the scale, the juice would granulate; below that it would not; here was a useful end gained. Cut your cane a little lower, or shorter for the mill. After securing enough of the upper portion of your cane for planting, feed the rest to your oxen, horses, mules, or other cattle; no feed is equal to it in equal quantities.

The sugar cane was once cultivated in Spain and Italy, but was found to produce so much of the molasses sweets, and so little of the sweets that would crystallize, that the cultivation was given up, and yet the molasses sweet is the more intense, and will probably go further in nourishing either man or animal, as it produces more alcohol in distillation in the ratio of quantity.

In the year 1821, being in New York, and still anxious to learn if the refining houses afforded anything new upon sugar-making, Mr. John Bolton carried me for that purpose to Mr. Strong's refinery, who readily accompanied us through his works. I was surprised to see a very large thermometer standing in the last boiler in his range, in the midst of the boiling syrup; I asked him for what purpose; he replied, turning to a young man that stood beside us, that his foreman had made a great discovery, that the instrument indicated, and uniformly, the point at which the syrup should be taken from the fire, to wit, 242° to 243°, depending, in some degree, upon the depth of the kettle, and the quantity of sugar refining. Taking Mr. Strong's direction, I purchased a thermometer before I returned to my lodgings, and this instrument was the first ever employed in boiling or preparing raw sugar.

Gen. Hampton republished, in Louisiana, some of my letters upon sugar, and this carried both the instruments into use there. I notice one or two of your correspondents mention the crystallizing point of syrup being intimated at 238° or 239°, but they mention their last kettle being but 14 inches deep, without adverting to the fact, that if the quicksilver rises above the surface of the boiling syrup the instrument no longer measures the temperature of the syrup; but the ratio of heat between the steam around the upper tube, and the boiling sugar around the bulb and lower part of the tube. Thus the thermometer, under experiments carefully made, must be adjusted to the size and form of the boiler, where it will serve ever afterward as an unerring guide.[*]

General Observations.—Many and various have been the changes in the manufacture of sugar within a few years. Mr. Howard's discovery of evaporating syrup in vacuo, or a temperature of 70°, was a great one, and resulted in giving him more wealth than his brother, the Duke of Norfolk, probably ever possessed, but is, I believe, impracticable on plantations, and this was the opinion of Mr. Howard himself. Some modifications had taken place of this plan before the ruin of the British colonies; to what useful end I know not.

A distillery in Edinburgh introduced the concave bottom instead of the convex, in the form of his stills. The excise in the British islands was charged upon the measure of the stills, and the number of hours it was worked, supposing it would check frauds upon the revenue. The distiller modified the form of his stills, and procured great increase of quantity; the excise law was amended to meet his case; he again changed his form of stills, and ended in being able to blow off as much spirits in 30 minutes as used to require 24 hours to produce. The distiller made his fortune; the excise law was altogether changed. This form of stills was introduced into France, but the chemist complained, that so rapid was the evolvment of the spirits, that the brandy was deprived of its aroma, of all flavor from the fruit. The account of this distiller's discovery, wth the form of his stills, you will find in the last supplement of Vol. VI. to the Encyclopedia Britannica, worth all the rest of the work twice over. And here I will observe, that you can in any bookstore in New-York, find much better drawings than I could send you of either mills or boilers; even Mr. Ellsworth's report for '42 will give you every form of sugar mill, from the $25 mill for domestic use, to the horizontal mill propelled by steam or water, to which alone it is adapted.

In this country, where cattle are cheap and abundant, and fuel neither good nor cheap, in the lower regions, I would recommend the vertical cattle mill. I fancy Louisiana has paid dearly for her steam mills, that have descended to her down the Mississippi, although they are the best for their cost in the world.

Wood in Louisiana is dear and bad; high pressure engines require much fuel, but little water; and the change they have made from cattle mills to steam mills has not bettered individually their condition. They have, however, recently adopted the form of the Edinburgh stills for the form of the bottom of their evaporating kettles, and there is no knowing to what extent that improvement will go. You can not evaporate the cane juice too rapidly, for the first law in making raw sugar is, that "the cane juice should be the shortest possible time in transito;" that is, from first being boiled to being finally ladled into coolers for crystallization. As to the cane sustaining any injury from being kept 24 hours in this climate, it is all nonsense. In Jamaica it suffers no injury in 48 hours; here I have known better sugar made from cane a week after it was cut, than it would have made the first day; some of the aqueous matter has evaporated, and if, upon looking to the cane where the hatchet has separated the stalks for the mill from the roots, you find it red, why chop it off, as far up as redness extends. This is better far than any litmus paper will direct your black man what cane to give to your mill, and preserve you from acidity, which in our climate is rather a hobgoblin than a real personage.

Since the first introduction of the cane plant, my friend Mr. M'Queen, of Savannah, brought from Jamaica two varieties of cane, a blue riband cane, that is, the stem of which was beautifully striped down its whole extent blue and yellow, and another variety of cane, white and yellow. These, at the same time, had been introduced, with the green cane, by Lieut. Blight, from Otaheite. The first, the blue and yellow, was carried from Mr. M'Queen's plantation near Savannah, and from my plantation upon Sapelo Island, Georgia, to Louisiana, by Mr. M'Queen's brother, and by a Mr. Queron, who purchased some acres from me. This cane is so hardy, that I think it might be grown in warm, sandy soils, dressed with animal manures and with diluted ashes, even to New York, for the feeding of cattle, and other useful purposes; the cane for planting being preserved in dry cellars, and only taken out for planting in warm days in April. The white striped cane is the tenderest of all the species, and in our cold seasons of years past, has disappeared from among us—no loss, although a very soft cane, and easily expressed. The objection to the blue striped cane, it is very hard to grind, and really gives but little juice at best; it, however, grows higher, and is adapted to lower grounds, to moister soils, and shorter seasons, and the plants are much easier preserved for the next year. Light frost upon the cane improves the juice, and we have known the green cane upon Sapelo Island, for a few days, give juice that gave 13 by the hydrometer when three pounds of juice made a pound of sugar; no cane in Jamaica ever did more.

I will now conclude. If there are any particular points you may require information upon, they will be replied to with pleasure, if in my power.

THOMAS SPALDING.

Sapelo Island, Ga.

THE PHYSICIAN AN AGRICULTURIST.

WHO can be a better farmer than the country doctor? With usually sufficient leisure on his hands to spend the necessary time in the cultivation or superintendence of his acres, more or less, and by profession, as he should be, a tolerable naturalist, chemist, and an observer of the physical laws, with the important advantage of daily observation of their husbandry, and continual and friendly intercourse among the farmers and gardeners of his neighborhood for many miles around him, no one has a better opportunity to excel as a farmer than himself. What but absolute want of taste, and a total absence of all observation and interest in the prolific bounties of nature, should prevent our country physicians from being our best husbandmen and stock-breeders? Of all the professions connected with rural life, commend me to that of the country doctor. I speak it with all possible respect and approbation, and for one I most humbly thank Dr. Stevens for bringing this subject before the public; and I wish now, some one would follow up the hint by a lecture on THE CLERGYMAN AN AGRICULTURIST. After this should come the SQUIRE. What a glorious trio. I can not help apostrophizing them in the language of the poet:

---

[*] I am aware that Detrone, a French chemist had introduced both instruments upon one plantation in St. Domingo; but his general plans were rejected, and these two instruments were neglected, and it is only within a few years past Detrone's plans have been published in England or America, by Porter, Philadelphia, 1831, 10 years after I was using the thermometer, and 20 years after I was using the hydrometer, which guides you as to liming the juice.

Parson, doctor, and the squire!
Best adviser,
Best prescriber,
Best decider,
Why not *best* of farmers then? PUTNAM.

MASSACHUSETTS FARMING.

NOTWITHSTANDING there are some things in this state to lament, there is much which calls forth our admiration, things worthy of imitation by every citizen of the United States, who wishes to make himself comfortable and easy in his circumstances by that course of conduct which has never been known to fail of success, viz., by purchasing a few acres of land, and *paying* for it, and then living upon what he can raise from it by his own labor, until by the fruits of his earnings he has something to spare for the labor of his less provident neighbor, who has to give labor in exchange for bread. There have been many glowing accounts given in the Agriculturist of farms renovated; of swamps drained; of rocks too large to be removed sunk so deep as to enable the husbandman to plow over and raise a crop upon them; of fine houses, barns, and out-buildings; of pleasure-gardens and green-houses; of large fields and great crops; of fine thorough bred stock; of horses, cattle, sheep, and swine. All this is very well, and those gentlemen who have retired from business, with their thousands of dollars, can not be too much applauded for the example they have with so much laudable zeal given to others, who might do as they have done, instead of spending their ten thousand dollars a year by living an idle city life, or travelling in Europe to see, hear, and find out things that are worse than useless, and never ought to be known or practised in our happy republic.

When I ask the small farmer or mechanic why he don't improve his lands, and do as Mr. C, Q., or Z. are doing with their lands, and get an equal amount of produce according to the number of acres they cultivated, the general reply is, "Oh, these are book farmers; I can't afford to take agricultural papers, and if I could, I have no time to read them. Besides, it is their money which gives them their large crops, and their roots and grain which makes their breed of cattle better than mine." When I assure them it is not so, that the rich man properly conducting his farming operations, reaps an income from his outlay, that I have seen the balance sheet of their outlays and returns, and that they show a profit on their investments equal to that of any other business—speculating in corner lots and mulberry trees to the contrary notwithstanding.

Among others I quoted *Honest* John Davis, late governor of Massachusetts, who had recently stated to me, among many other interesting things, that he had purchased fifteen acres of miserable, poor, worn-out land, a few years previously, divided it into three lots of four, five, and six acres; that through the summer last past he had pastured a yoke of large working oxen on the four-acre lot, which are now (November 12th) in high condition, fit to put into the stalls for feeding, and still the feed was luxuriant at that late season. On the five-acre lot three cows had been pastured, from which milk, cream, and butter, had been obtained for a large family, besides several pots of butter put down for winter use, or for sale. I have known in my travels a breeder of *fine* stock who kept 36 cows, and had to *buy his butter for family use!* And not over four cows out of the herd could be approached with a milk-pail—many of their bags or teats injured, and the calves which run with the cows as wild as buffaloes.[*] The six-acre lot was equally productive. I understood him to say it had afforded two good crops of hay. When asked by a neighbor what he had done to that piece of land to make it produce so much, he replied, "Very *little*. I mowed the brush with which it was covered, and sowed it with plaster at the rate of a bushel to the acre. For the first two years very little benefit appeared from its use, since which the grass has continued to thicken and grow more luxuriant from year to year, and is now a perfect mat over the whole ground."

But I can hear Brother Jonathan saying to me, "You needn't tell me nothin' about Governor Davis's farming; he was college larn'd, and a lawyer to boot—then went to congress—and then was governor of the old Bay State—and then went to congress agin as senator; if he knows anything, 'taint nothin' but book farming. Plaster wont do land no good, I tell ye; if it makes more crop on land this year, there wont nothin' grow on it next."

To all this I can only answer, that the governor was brought up on a farm; that his father, grandfather, and great-grandfather, before him, were all farmers; and that the latter carried his plow several miles upon his back 130 years ago, when he first came into Worcester, because there was no road, and the trees, bogs, and brush, were so thick he could not draw it with oxen to the land he had purchased.

There, Brother Johnny, is a farming pedigree for you; so now turn about and make as good a manager of your land as honest John Davis, your late governor. A TRAVELLER.

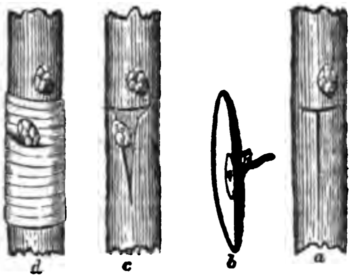
---

[*] Our correspondent seems disposed to be rather sarcastic on fine stocks and farming in general, and ourselves in particular; but he shall have his say, for fear he might accuse us of partiality, and is welcome to cut and thrust as he pleases. We could defend, under certain circumstances, the practice of letting calves run with their dams, and several other things here touched upon by "A Traveller," yet would rather leave the matter to some western correspondent, where farming is necessarily done, and *profitably* too, on a large scale.—ED.

BUDDING.

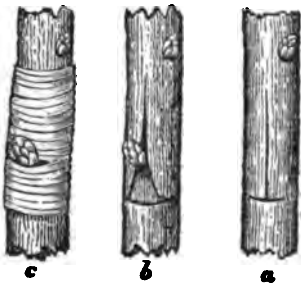
1. The season usually adopted for budding or inoculation, is in the month of August, and is sometimes called *summer-budding;* but it may be performed as soon as shoots with good eyes of the current year can be had, which may be reckoned from mid-summer to the middle of August—the criterion being the formation of buds in the axils of the leaves of the present year. The buds are known to be ready for insertion, by the shield or portion of the bark, to which they are attached, easily parting with the wood. Let the scions, from which the buds are to be procured for inoculation, be taken only from the outside branches of healthy and fruitful trees. The buds usually preferred, are those on the middle of young shoots, as they are not so liable to run to wood as those at the extremity, nor so apt to lie dormant as those at the lower end. In some cases, however, as in the walnut, the buds at the base of the annual shoots should only be used. Let the buds be collected in a cloudy day, or at an early or late hour of a fair one. When they are to be transported at a distance, they may be packed in moistened moss; or if shortly to be used, they may be put into a vessel of water; though, in general, they should be used as soon as possible after gathering. Before the buds are prepared, get the stock ready to receive them. At the part fixed on for the inoculation, which should be smooth and rather on the northerly side of the branch, make an incision with a sharp knife quite through the bark, but not into the wood, in the form of the letter T, as at *a, fig.* 44, having the cross cut and slit downward of a necessary length to admit the bud. This being done, proceed quickly and take off a bud by holding a shoot in one hand with the thickest end outward, and with the knife in the other hand, enter it about half an inch or more below the bud, cutting nearly half way into the wood of the shoot, continuing it with one clean slanting cut, about half of an inch or more above the bud, so deep as to take off part of the wood along with it, the whole to be about an inch and a half long as represented by *b;* then directly with the thumb and finger, or point of the knife, slip off the woody part remaining on the bud, and observe whether the eye or germ of the bud remains perfect; if not, and a little hole appears in that part, it is unfit for use, or, as the nurserymen say, "the bud has lost its root," and another must be prepared. This being done, place the back part of the bud or shield between your lips, and with the flat haft of the knife or a piece of ivory or bone formed for the purpose, separate the bark of the stalk *a* for the admission of the bud, which slip down close between the wood and bark to the bottom of the split *c.* Then cut off the top part of the shield containing the bud even with the horizontal or cross-cut first made, in order to let it completely into its place, and to join exactly the upper edge of the shield with the transverse cut, in order that the descending sap may immediately enter the back of the shield, and deposite granulated matter between it and the wood, so as to effect a living union. The parts are next to be immediately bound round with a water-proof bass ligament, or some substitute, as in *d*, beginning a little below the bottom of the perpendicular slit, proceeding upward closely round every part, except just over the eye of the bud, and continue it a little above the horizontal cut, sufficiently tight to keep the whole secure, and to exclude the air and moisture without the use of grafting-wax or clay. In a fortnight, at farthest, after performing the operation, such buds as have united may be known by their fresh appearance, and in three weeks, all those which have succeeded, must have their ligatures loosened, and in a week or two more, entirely removed. In the spring following, the stocks should be headed down, leaving one or two shoots above the inserted buds.

Budding.—Fig. 44.



2. Another sure and expeditious mode of inoculation, is that known by the name of *spring-budding*, by which the bark of the stock, as early in the season as it will separate from the wood, is cut like the letter T inverted, (thus ⊥,) as shown by *a*, *fig.* 45; whereas, in summer-budding, it forms a T in its erect position. The horizontal edges of this cut in the stock, and of the shield-bark containing the bud, should be brought into *the most perfect* contact as denoted by *b;* because the union of the bark, in spring, takes place by means of the ascent of the sap, whereas, in summer-budding, it is supposed to be caused by its descent. The parts should then be immediately bound with a bass ligature as shown by *c*, without applying either grafting-wax or clay. The buds may be inserted either in a healthful branch, or in a stock near the ground. In general, two buds are sufficient for one stock; and these should be of the same variety, as two sorts seldom grow with equal vigor. The bass ligature which confines the bud, may be removed, if the season be moist, in a month after budding; but if it be hot and dry, not for six

Budding.—Fig. 45.



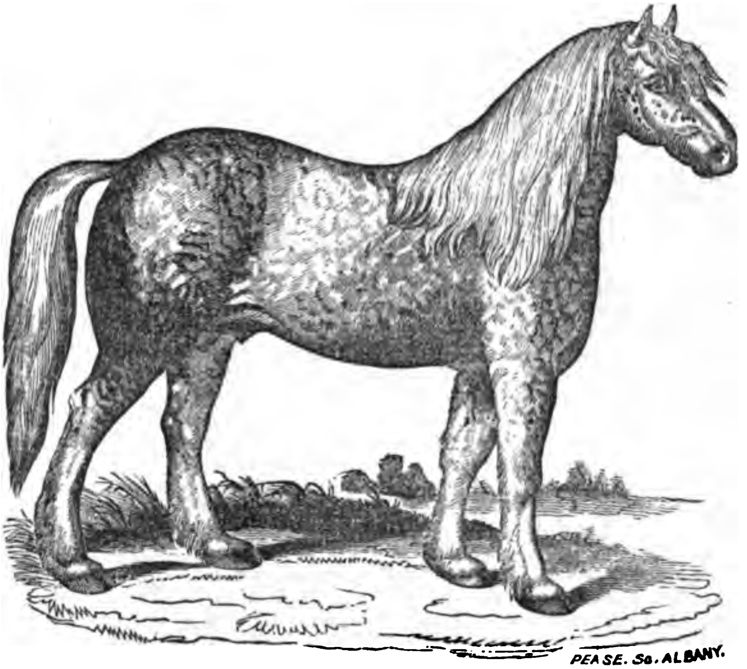
weeks, at least. As soon as the inserted buds show signs of vegetation, the stock or branch containing them should be pruned down, so as to leave one or two buds or shoots above. If the stock is allowed to have a leading shoot above the inserted buds, and this shoot should not be shortened, the inoculation will not show many signs of vegetation for several weeks.

3. *Scallop-Budding* consists in cutting a thin section of bark and wood, of almost any shape, from the side of the stock or branch to be budded, and in preparing a similar section containing a bud which must not be separated from the wood. The latter section or shield is then laid on the corresponding scallop in the stock, with its upper or lower end exactly in contact with the bark of the stock, as in spring and summer-budding, with one of its sides, at least in contact, as in whip-grafting. After this, the ligature is applied in the usual way, and the future treatment as above, according to the season. The advantage of this mode over others is, that it can be performed at seasons when the wood and bark do not freely separate; but the operation requires more time, and the buds are less liable to take.

D. Jay Browne.

Read before the Farmers' Club at the American Institute, N. Y., June 18th, 1844.

NORMAN HORSE DILIGENCE.—Fig. 46.


PEASE. Sc. ALBANY.

Imported by and the Property of Edward Harris, Esq., Morristown, N. J.

For the above cut of Diligence, we are indebted to Mr. C. N. Bement, one of the editors of the Central New York Farmer, who pronounces it a spirited and faithful likeness to the original. We extract from the Farmer, Mr. Harris' account of this breed, and his importation.

"The object of importing the Norman horse had been resting on my mind from the year 1831, when I passed through France for the first time, and witnessed with astonishment the perfect ease with which these *Double Ponies* as they are sometimes called in France, trotted along at the rate of six and seven miles an hour before the incredible loads piled upon and stowed away in the diligences, and then when they stopped to change after a stage of from ten to fifteen miles,—without the slightest symptom of fatigue—to see the hardy rascals commence biting and kicking each other (they are never castrated) amid the *sacres* and beatings of the conductors, postillions, and stable-boys. These scenes repeated at every stage, could not fail to attract the lively attention of any one having the slightest penchant for that noble animal the horse. From that time I never abandoned the idea of transplanting them to my native soil. I saw in them the veritable progenitor of the Canada horse on a larger scale. I saw in them what I am not aware of having seen before or since in any distinct race of horses, I mean the property of *quick draught before a heavy load.* I also saw or fancied I saw in them the means of speedily raising the character of our fine-spun breed of horses, in this valuable property, without in the least impairing their courage and actions and at the same time impart to them a more docile spirit and a perseverance that never flags at the *dead-pull*-

That these properties, if possessed by the breed, must be imparted to their progeny in a far greater degree than would be the case from any horse selected as a stallion from our own mixed stock, even if he possessed them all in a superior degree, must be evident to any one acquainted with the true principles of breeding—from the fact that *they have been kept a distinct breed for ages.* To you I need not enlarge on this important fact. I could add a great deal more about the fine condition in which these diligence horses are always kept in spite of hard driving and worse grooming—about the great age they sometimes attain; the rarity of spavins, windgalls, or other blemishes of the limbs, but you might think I was coloring too highly, and besides I should never get to the main part of the story—the importation.

"On my next visit to France, in the winter of 1838 and '9, I set about making the necessary investigations in regard to purchasing, shipping, &c., and sometime in the month of April I had collected at Havre two stallions and two mares; one of the stallions on examination did not please me and I got rid of him at a sacrifice. The remaining stallion was a fine animal of two years old, as I had been informed by my agent that stallions over that age could not be exported. It appeared afterward that the law to that effect had recently been repealed, an error which I had reason to regret, as the stallion died on the passage, from a cold which fell on his lungs, owing probably to his having been too tenderly raised. When I got my horses on board the ship, I could not procure a suitable person to go with them and was obliged to hire one of the Swiss passengers going out in the vessel who said he had been accustomed to horses. Not feeling satisfied with this arrangement, I determined on the eve of the vessels sailing to go out with them myself. The horses all took cold from a sudden change in the temperature, and required much attention, the stallion dying before the end of the voyage which lasted thirty-six days. The mares remained a few days in New York to recover from the effects of the voyage, but as I did not consider them in a fit condition to travel to my farm, I sent them on by the railroad. The next day I had the mortification to learn that one of them had her leg broken by the giving way of the bottom of the car. So that after all my trouble and expense I had but one mare left. Determined not to give the matter up—in three weeks from my arrival in New York I was on my way back in the Great Western to look up another cargo. I arrived in good time for the Fair of Guibray, one of the principal fairs in Normandy, and purchased four more, two stallions and two mares. This time I was not obliged to go out with them, as I procured an excellent fellow to take charge of them. The horses as before were all sick, but by strict attention to the directions he had received from the veterinary surgeon and his great care of them, he carried them safely through. The loss of one of the mares, which died of apoplexy a year ago, is the only additional misfortune I have to record. Everything goes on as well as I could wish. Diligence pays his way handsomely and his oldest colts which are a year past, are of excellent promise, and I feel no regret in the retrospect of the difficulties encountered nor of the money expended. If I should receive no further reward, the flattering notice of my horse Diligence by your society, and the uncommon patronage he has received from my neighbors the three past seasons, will always be remembered by me with the greatest satisfaction."

All writers whom we have read on the subject of the Norman horse, agree as to his merits; and there can be no doubt that it is one of the hardiest and most useful breeds to be found. Some of their Canadian descendants, however, are not so *small* as generally represented. We have often examined with much satisfaction, a grey Canadian stallion now standing on Long Island, 15½ hands (62 inches) high, weighing about 1200 lbs., that can trot a mile in 3½ minutes, walk 5 miles easily in an hour, and is of great power at a dead pull. The portrait of Diligence above would be a very good one of him, save that his grey is not so handsomely mottled, and he has much less hair about the legs. We hope that Mr. Harris' horse will be well patronised, for he deserves it; at the same time, we think there is now and then a Canadian, and what is commonly called the Poney Dutch breed which are highly valuable, and should be sought out and extensively used as improvers of the hardy, enduring horse of all work.

KEEPING FOWLS IN WINTER.

I HAVE had a large number of eggs the past winter, from following in part the advice I have seen in your and other papers. I have kept my fowls in a warm place, have given them as much grain as they wanted, always keeping it where they could get it when they wished; having also a box containing gravel, lime, and ashes, which they could pick at or roll in, and furnishing them with graves or scraps, which is a substance obtained in large quantities from the melting association of this city. Of this substance they are extremely fond, and it made them lay prodigiously. Animal food appears to be so essential to fowls while laying that I shall never pretend hereafter to keep fowls in the winter without it.

HENRY A. FIELD.

New York, June, 1844.

EGGS HATCHING AFTER TRANSPORTATION.

THERE is a general opinion that eggs carried any distance, especially over water, will not hatch. The experience of a neighbor of mine this spring, proves it to be erroneous, if the eggs are fresh. In the beginning of April he brought from New Jersey, fourteen hen's eggs, packed in a basket with oats. He came up the Hudson river in a steamboat to Albany, and thence by railroad to this place. A week after his return, he put them under a hen, and each egg produced a chicken, all but one of which are now living.

CHARLES H. TOMLINSON.

Schenectady, 6th June, 1844.

ORGANIC IMPROVEMENT OF DOMESTIC ANIMALS.

Sheep and other animals were subdued and domesticated, long before their biped captors and masters were able to keep a record of their doings for the benefit of their posterity. Hence we know little of the original stock from which our domestic animals have descended, and less of the early treatment they received, at the hands of our own progenitors. Nor is this information important. It concerns us mainly to understand how a change of food, temperature, and of all surrounding circumstances, will either *improve* or *deteriorate* the organic structure and natural functions, which transform for the practical farmer his cultivated plants, their seeds and roots, into wool, beef, pork, milk, lard, butter, and cheese. That there is a wide difference in the results obtained, by the operation of this living machinery in different animals, no observing man can doubt. Of two cows of equal weight, and consuming equal quantities of food precisely alike, one will elaborate for its owner 18 quarts of milk in 24 hours, while the other can form but 9 quarts in the same length of time. A pig, whose organization is apparently nearly perfect, will elaborate from a given amount of raw material, twice as much flesh and fat, as another whose respiratory and assimilating machinery are very defective. Experience and science alike demonstrate the truth of the remark that it takes 50 per cent. more food to produce a given amount of muscular strength and power of locomotion in one horse or ox, than is required in another. Animals that had a common parentage ten generations back, now possess not only widely different forms, but organic and constitutional peculiarities, of great importance to those that may become rich or poor, according to the well or ill management of their herds and flocks. Eminent success alone attends *skill* in the breeding and keeping of domestic animals. This valuable skill is acquired by close observation, and studying the uniform laws of nature that govern the growth, maturity, and decay of organic beings. The most important and material changes in the development of the organs of animals, and in the function of each organ, are made during the period that elapses from the first formation of the embryo, to the maturity of each living complex structure.

"As the twig is bent the tree's inclined."

The plasticity of young animals and plants, and the extreme changes that may be wrought in their forms and habits are truly wonderful. The human brain itself can be moulded in infancy into any shape to suit the whim or taste of a "Flat-Head" or a "Round-Head" Indian. Nor is there a single mental or physical function in the human system, that may not be either *improved* or *impaired* by the good or bad influences which may be brought to bear upon it. The science of physiology is a noble science. It enables cultivated reason to trace results—the products of animal life, such as flesh, fat, milk, and wool—back to their known causes and elements.

I can hardly expect to give you even an outline of the organization and workings of this complex vital machinery. There are, however, a few cardinal points in this matter, which I will endeavor to make clear and intelligible. One is, that no animal or plant can possibly transmute one simple elementary substance into another. If a hen be fed on food that is quite destitute of lime, the organs of her system can not form an egg-shell, so if a child, calf, or colt, be kept on food that lacks phosphate of lime, its bones will be soft and cartilaginous. No other minerals can be changed into lime or phosphorus.

Animal fat is a compound made up of carbon, hydrogen, and oxygen; and no other simple elements can possibly make it. Lean meat and wool contain the same elements, with the addition of nitrogen, sulphur, and several other earthy ingredients in minute quantities.

Knowing that no animal can create anew one particle of matter, and that each compound product has its peculiar constituent elements; knowing also how much of those elements is contained in any article of food, we can judge of its fitness or unfitness to produce either bone, muscle, fat, milk, wool, or any other animal product. In other words, we can wisely adapt our *means* to the *ends* we have in view.

Suppose a farmer had 100 hens in his poultry-yard, and he desired them to lay as many and perfect eggs as possible. Would it be an unreasonable prescription to say to him that "you must feed them liberally on food which contains not only lime, but all the elements of the contents of an egg-shell in a concentrated form? Deny not the raw material, if you expect the bird to elaborate for your table, or for market, a large product of this article of human food."

Is it anything extraordinary that a race of cows, whose mothers for many generations have had their milk-forming organs largely developed by being fed on food well adapted to that end, should secrete far more milk from a given amount of raw material, than a race of wild cows, whose lacteal glands had been denied all the advantages that result from quietude, rich pasture, and regular dry milking?

A sheep consumes several pounds of food daily. Of this, at least eight ounces are composed of the constituents of wool. Now if the capillary organs of this animal transform only two per cent. of these elements into wool in 24 hours, then in 100 days the sheep will grow one pound of this valuble product. This will give a fleece, which will weigh $3\frac{65}{100}$ lbs. in 365 days. Is it not practicable so to improve the vital action of the wool-forming machinery of our twenty millions of sheep in this country, that this machinery shall transform *four* instead of *two* per cent. of the raw material of wool into that substance? That this organic machinery is perfect no one pretends; or that it has already been greatly improved, is not denied. The manufacture of wool out of its constituent elements, is a branch of science of great importance to the farmers of the United States. They possess an inexhaustible quantity of the raw material of wool, and enjoy every advantage for its profitable production. To develop the capillary organs of the sheep, the animal should have a warm, or rather a comfortable, well-ventilated apartment in winter—should be kept quiet throughout the year; that is, it should not be compelled to travel too much to find its food. It should have the organs that form this animal product *at all times* stimulated to a preternatural action, by having the arteries that convey nourishment to these organs, preternaturally loaded with the elements of wool. A plant grows best in a soil rich in the elements of such plant. So too an animal, and especially a young animal, elaborates the most flesh and fat when its blood-vessels are best supplied with the elements of those products.

Clover, oats, turneps, beans, peas, and other leguminous plants, contain more of the constituents of wool than timothy, herds-grass, potatoes, and corn. All animals should be fed regularly, and particular attention should be paid to their health and comfort. It is, perhaps, needless to say, that every improvement in the practical workings of all this living machinery can be transferred from parent to offspring by judicious breeding.

The action of the respiratory organs in all domestic animals has a material influence upon the formation of fat, muscle, milk, and wool. The lungs never cease night nor day to expel more or less of the elements of animal food through the windpipe into the air, in the form of carbonic acid and vapor. The organization of some animals is so defective that they consume in this way a much larger quantity of the constituents of flesh, fat, milk, and wool, than is necessary or profitable. The more an animal exercises, the faster he breathes, and other things being equal, the poorer he becomes; because, instead of nourishing and supplying the waste in the system, the elements of the food escape in a larger ratio from the assimilating organs. The food of animals consists essentially of carbon, hydrogen, oxygen, and nitrogen. The first escapes through the lungs, the second and third escape in vapor, perspiration and urine, and the last (nitrogen) also escapes by the kidneys. Hence, a cow when driven twelve miles a day, never gives as much milk as she does when consuming the same amount of food and remaining quiet in a pasture or stall. It is an easy matter to enlarge or diminish the size of the blood-vessels that convey the elements of milk to the lacteal gland of the cow, or the vessels that convey the elements of wool to the capillary organs of the sheep. It is not difficult to increase both the size and strength of the muscles of a colt, or of a young bullock. Like the enlargement of the muscles in the arm of a blacksmith, *judicious exercise* must come to the aid of judicious keep. D. LEE.

Albany, April 30, 1844.

SOUTHERN PRODUCTS.

I HAVE been a subscriber to your periodical from its commencement, and a careful reader of the various articles which have appeared in its pages, and with nothing have I been more pleased than with those communications which from time to time have been inserted, recommending to the attention of our farmers and planters new and valuable objects of cultivation. These communications are worthy of the most profound consideration of every cultivator of the soil. The articles on madder and indigo particularly commend themselves to attention. In a country so widely extended as ours, stretching as it does from the Gulf of the St. Lawrence *almost* to the tropics; embracing, too, every variety of climate, there can surely be found a climate and a soil adapted to almost every plant useful by its employment in the arts, or to the sustenance or luxury of man.

Every year we import largely the agricultural productions of other countries, which we might just as well, and indeed, *better* raise at home. We purchase annually large quantities of olives and olive-oil from France and Italy, and figs from the Levant, and we buy many millions of pounds of tea from China. There are numerous other articles, too, of which the same remarks might be made with truth, but which do not at this time occur to my mind. The production of these articles at home is to be desired and encouraged by every well-wisher of his country; for I think it must be conceded by every intelligent man acquainted with the agricultural interest throughout the United States, that our farmers and planters have confined their attention to too few objects of cultivation. At the south, particularly, has this been the case. Cotton, sugar, and rice, have been the staple articles of the southern planters, and to the production of these have they directed their whole energies. The consequence of this has been an *over*-production; and when we consider the immense section adapted more particularly to the cultivation of cotton, it would seem that the danger of over-production in that article more especially, is yearly increasing. The same is true of the western country. The facility with which wheat and every other species of grain adapted to the climate is raised, is so great, that there has been, still is, and under present circumstances there *must* be, a production far exceeding the demand. Now the south and west are essentially agricultural regions, and for a long time must continue so; and to me it is very doubtful whether they ever become extensively manufacturing countries. At least, it will be conceded that a large manufacturing interest will not arise there, until the population becomes much more dense than it is at present. This state of things will surely increase the danger of over-production, which at present exists, and which is the true cause in my opinion of the low prices which we have had for a considerable time, of almost every article of agricultural produce; and these low prices must I fear continue, and indeed must fall still lower; for if we go on producing at the rate we have done and are now doing, we shall not only be unable to consume our productions at home, but we shall also find it more than difficult to obtain any market abroad sufficient to absorb our surplus. To many of your readers these assertions of mine may seem not only bold but incredible, and I am fully aware that a general rise in produce has taken place during the past year. But I am satisfied of the truth and soberness of my ideas: for, as you well know, I have travelled extensively, and I have examined most of this country pretty thoroughly, and I think your own experience gathered from long and distant travel, will bear me out in what I assert. The results of the crops throughout the country for the next five or six years will I am confident, sustain my position.

I assume, then, that an over-production *does* at present exist, and will continue in an *increasing* ratio. Is there then any remedy, and if so, what is it? It seems to me that the true and sufficient remedy is to be found in extending our articles of cultivation, and extending them too, until we raise in this country everything which our climate and our soil will permit us to raise at a reasonable profit; and it becomes the duty of every good citizen to lend his aid in accomplishing this very desirable object. But for this purpose individual effort is not sufficient. The people in their collective capacity should assist. The legislatures of the different states should do something and do it carefully, energetically, and thoroughly. If the legislature of the nation could be induced to extend its powerful aid, it would be no more than a duty it owes to the people. But I fear that it is too much to expect from that degenerate body. At any rate, the *state* legislatures might and could be induced to act, and their mode of action should be this. Take for instance the olive-tree, the indigo, and tea-plants. I have no doubt that there are very extensive regions of the south exceedingly well adapted to their successful and profitable cultivation. The olive has been grown in Alabama; the indigo plant was at one time extensively cultivated in various districts of the South; and I am credibly informed that the tea-plant has been successfully cultivated to a small extent in two instances, the one in North Carolina, and the other on an island on the coast of Georgia. Nor is there any reason why either and all of these should not become great staples at the south; for the climate is well suited to their production, and if the cultivation should become extensive and profitable, it would not only relieve the south of the pressure of that great evil, an over crop of cotton, by dividing the direction of the energies of the planter, but would also prove a source of increased and increasing wealth to that region.

Their legislatures then should act in this way. Intelligent and capable agents should be sent out to obtain information on the subject of the cultivation and preparation for market of these articles, (if such information can not be obtained at home, and in the case of the tea-plant it can not,) and on the return of these agents, the information they bring with them, should be extensively circulated among the people; and the plants themselves should be widely distributed, and if necessary, experiments should be conducted at the public expense, and above all, liberal bounties should be offered for the encouragement of the cultivation. In this way, the cultivation of indigo, olives, and tea, would in a few years obtain a firm foothold at the south, and her people would not only find themselves supplying our own country, but exporting to other countries. By such encouragement the silk culture has grown up and already taken firm root, and will, I may venture to predict, in a few years produce results very different from those anticipated shortly after

> "The days when we went *mulberrying*,
> A long time ago."

The present, moreover, is a most favorable time to take active measures for commencing the cultivation of the tea-plant especially, for our own country is just entering on better times, and we are about forming new and interesting relations with the Chinese. But these remarks do not apply merely to the cultivation of the olive-tree, and the indigo and tea-plants, worthy as they are of the attention of the south. Numerous other articles of agricultural production might be pointed out, and will doubtless occur to yourself and your readers, to which my observations might be with equal truth applied. Let some or all of your numerous intelligent subscribers at the south investigate this subject with the attention it so well deserves, and strongly petition their legislatures to consider and act upon it; and the result, if the matter be persisted in, can hardly fail to be most important and beneficial to our southern agricultural brethren.

I have not by any means exhausted this subject, either in its bearing on the south, the west, or even our own more rugged and inclement north; and should you permit me again to occupy a space in your columns, I shall endeavor to point out some other and equally important considerations as connected with this most interesting topic. In concluding, I would fain hope that you and your numerous intelligent correspondents, will go on pointing out to us other new and valuable objects of cultivation, adapted to the different sections of our wide-spread but common country, and I trust that you will arouse the attention of the agricultural public in every way in your power, and by so doing you will oblige and interest more than one

NORTHERN FARMER.

PIGS SUCKING A COW.

IN an Illinois journal for the present month, I see a notice of a cow, when lying down, deprived of her milk by a porker. It reminds me of a matter occurring under my own observation, which I will mention, and when you see Col. Bomford of the Ordnance Department, mention it to him, as from the short acquaintance I had the gratification to form with him in 1840, when on a visit to his house with my much-lamented uncle, the late Hon. Henry Baldwin, I was happy to see, and make improvement of his knowledge of the habits and instincts, sports and pastimes, of domestic animals.

For several weeks in succession, our dairy-maid complained that our best cow was deprived of her milk by some foul means. That when she came from pasture she had just been milked, and that the udder was still wet. I could accuse no one but a tenant who lived near the lane through which they passed, and which was generally open from the cow-yard to the pasture. The accusation was denied with evident surprise. At length I determined to watch the cattle on their evening walk from their pasture, and you may judge my surprise, when I observed that on the cow mooing as if in search of her calf, about fifty yards distant from the yard, four shoats, three months old, ran squealing down to meet her at their utmost speed. The cow remained in the rear of the others, and quietly and patiently stood still till every drop of milk was extracted from her udder by the pigs; they *standing* the while erect on their hind legs, with each a teat in its mouth. The place for the operation was most favorably selected, as small apple-trees interposed between the parties and the house, which stands upon an elevation. The extraordinary thrift of my pigs, which all along was so discernible, was now accounted for; and I learned a lesson which shall never be forgotten through life, viz: never to make accusation on mere circumstantial evidence unless strongly corroborated.

I shut my pigs in a pen immediately. The next morning the cow appeared as uneasy without their visit as if she had lost a calf, and the pigs squealed in answer as if they had been deprived at the time of their mother *sus*.

Now, as Professor Silliman thought his story worth publishing, I have concluded to *write* mine to you.

Preserving a Goose-Egg Under Ground.—I was walking this morning behind my plowman, when his plow turned up from the soil, at the depth of about 8 inches, a goose-egg of very rusty complexion. Almost taking it for granted that it was spoiled, I opened very carefully a small space in one end, with the point of my knife. As no explosion ensued, I made the opening still larger, and to my surprise found the egg perfectly sweet, and its different parts perfect, with the exception that it contained a *very small embryo* completely developed. The white of the egg was as clear and sweet as if newly laid. There was no possible perceptible difference, the yolk was of the natural color and entirely sweet to the smell. The egg must have been in the position from which it was taken, at least twelve months. There can be no mistake in the matter. The ground where it was deposited was a deep, mellow, alluvial loam. Oats had been sowed and harvested last year, and the ground seeded to clover, which, from some cause not having taken well, I am plowing the same land for corn. The egg must have been plowed under last spring. Something perhaps may be learned from this; at least of interest to the good lady of the farm-house, if not to others.

Jos. C. G. Kennedy.

Hillside, near Meadville, Pa., 30th April, 1844.

MINERAL PHOSPHATE OF LIME.

When the great value of phosphate of lime for agricultural purposes is generally understood, as it must already be by intelligent farmers, it is a matter of surprise that no more use is made of it, and that it has been subjected to so few experiments, with reference to its application to this object. This mineral is identical with the chief ingredient of bone-dust, and may with equal profit be substituted for that as a fertilizer.

Bone-dust, after deducting the animal matter which it contains in its natural state, which is about 33 per cent. consisting mostly of gelatine, with a small addition of cartilage and fatty matter, contains about 86 per cent. of phosphate of lime; the remainder being composed principally of carbonate of lime, with a small amount of phosphate of magnesia, soda, &c. But as most of the animal portion of bones is usually extracted before they are crushed and ground for the farmer's use, and frequently are reduced to this state by calcination, by which all this organic matter is effectually expelled, we have the earth of bones, differing immaterially for the economical purposes of agriculture, from pure mineral phosphate of lime. This exists in nature, under a variety of forms.

Phosphorite is found in extensive beds, in a massive state, generally of a yellowish, or grayish white color. *Apatite* is another variety, of considable diversity of color, abounding in certain regions, and particularly abundant in Estramadura in Spain, whence it has been exported to Ireland, to a considerable extent, for agricultural purposes, but with what results we are yet ignorant. Its colors are whitish, or faintly red, blue, and green. Another variety, found in very limited quantities, from its lustre and transparency, has been sometimes ranked as a gem. Its beautiful green color has secured for it the name of *asparagus-stone*. It is dentical in composition with Apatite. *Osseous breccia* frequently occur, and contain a large proportion of phosphate of lime.

Fossil guano has been recently found in England, in a number of places, and contains a large amount of phosphate of lime. It has already been made subservient to the interests of agriculture. *Coprolites* and other organic matters, the remains of bones, teeth, &c., the exuviæ of fish, birds, and animals of preceding ages, indefinitely remote, exist with more or less mixture, in many places, either as marl or solid limestone. It is the presence of these organic remains, giving to them a considerable proportion of phosphate of lime, which renders many of the marls of our own country so valuable to the farmer.

In referring to the five annual Geological Reports made under the authority of the state of New York, I find only a brief notice of this mineral in two of them. The first is made by Dr. Emmons in the report of 1838, in which it is described under the head of *Eupyrchrorite*, from its giving off a beautiful phosphorescent light, when subjected to a strong heat. "Its color is a pale malachite green, passing into a greenish-white and sometimes brownish. Structure indistinctly fibrous in the thin, mammilated layers. Colors of the several layers various. Dull and opake. Hardness, 4; specific gravity 3.06." The above specimen was found near the landing at Crown Point, but in what quantity is not mentioned.

Dr. Beck refers to the above specimen in the report of 1840, under the head of "*Fibrous phosphate of lime*," and gives an analysis of its composition. He found it contained of

Phosphate of lime	92.85
Oxide of iron with a little alumina	5.20
Silica	.50
Moisture (water?)	1.25
Fluoric acid	a trace.

He considers the oxide of iron, silica, and alumina, as accidental ingredients. He also found specimens in Orange county, and at Rossie, St. Lawrence county.

It is apparent that the gentlemen who made these reports were not aware of the great value of this mineral for agricultural purposes, as no reference is made to it in this view. The geological discoveries hitherto made in this state, although of incalculable value, and as great as could have been anticipated from the limited time and means devoted to them, are yet very incomplete; and it can not be doubted that subsequent investigations will develop this important mineral in numerous places, and in great abundance.

In England and elsewhere, it is found associated with carbonate of lime, frequently as a distinct layer, as it is seen in the lime formation near Clifton, constituting a strata of 6 to 12 inches in thickness, and extending for miles along the banks of the Severn. Beds of marl at Lyme Regis, were found to yield over 20 per cent. of phosphate of lime.

Thus it will be seen that our farmers must go deeper than the surface, or even subsoil, for the maximum of nutrition for their crops, and their ultimate profits; and they must use other and additional instruments to effect this, besides their spades and plows, and the hand work of their laborers. They must bring the lights of science, the genius and intelligence of geology and chemistry, to their aid, if they would reap all the rewards that should crown their honest toil. In these beds of mineral phosphate of lime are laid up treasures of an indefinite amount, securely hoarded in a form, which effectually protects them from all destruction and waste, till science unlocks them for the use of succeeding generations.

R. L. ALLEN.

Buffalo, March 25, 1844.

PAULAR MERINOS.—No. V.

I CLOSED my last communication, by a choice extract from Vol. 2d of the Transactions of the New York State Agricultural Society, for 1842, descriptive of the *counterfeit* Paular sheep of Messrs. Jewett, Hull, and others. "Large and coarse, good for *mutton*, but *inferior* for *wool*." "*Not at all similar to the old Paulars* that he had formerly seen, from the flock of Consul Jarvis."

This comprehensive and just description, covers the whole ground. It is truly "*multum in parvo*." And will you please bear in mind that it was from the pen of one who resides in their immediate vicinity, and who *knows* about them; one too, whose authority in regard to sheep and wool, your readers will not be disposed to question.

It would seem then, that the Vermont sheep advertised and puffed by Messrs. Jewett, Avery, Randall, & Company, under the false or *fancy* name of *Paular* Merino, are *not like* the *original* and *genuine* sort of Spanish Paular Merinos, nor even at all similar to them; so they can hardly with *propriety* be termed *counterfeit*, which would be a misnomer; but "*spurious* Paular" would seem to be the *right* name for them. I may probably at some time hereafter take occasion to recur to this part of the subject. For the present, I take leave of it.

In your last October number, Mr. Jewett commences a laudation of his sheep, by saying (in connexion with some modest hints of the extent of his own experience,) that, be they "Paulars, old Merinos, or anything, it matters not" to him. Aye, but there's the rub, my good sir. Though it "matters not" to *him*, yet it does (as things now stand,) matter *much*, to the *public*. Indeed there lies the whole *gist* of the existing controversy between him and myself. It is nearly all there was between us, to start with; and it is not by any means, to be so easily got over; at all events not unless Mr. Jewett is willing to *acknowledge* that it is, as I was always well satisfied that it was, and would prove to be; that neither he himself, nor any one else, really knows much, if anything, about the *blood* and *breeding*, of his sheep, and that consequently, no accurate and well-attested pedigrees of them, at all entitled to reliance, can by any possibility be produced. This, I have no sort of doubt, is the real state of the case.

How indeed, can it be otherwise? We do not hear that *his* father "purchased pure Spanish Merinos, direct from the importer," and that they have been bred ever since, by his family and himself, "without adulteration or mixture with any other sort." Nothing at all of this. No such thing is claimed. How then came Mr. J. in possession of the sheep composing his flock? Why, no doubt fairly and honorably, by *purchase;* which certainly gives him a good and indisputable title to them. No one disputes it. And very likely they may be *good* sheep. Doubtless some, and perhaps many, among them, *are* so. It is altogether probable that they are; and they *should* be so, for this reason alone, if for no other, (and I really do not suppose there exists any other,) that Mr. Jewett has, within a few years past, as I understand, been in the way of *picking up* good sheep from time to time, as opportunity offered, by purchase from his neighbors and other Vermont farmers and wool-growers, so that his flock, but recently made up somewhat in that way, would be likely to present a favorable exhibition of the various grade or mixed, mongrel flocks now existing among the farmers in that part of Vermont: of course better than an *average*, because Mr. Jewett would naturally "pick up" the best sheep he could buy, and (so far as in his power,) from such flocks as might appear to be most desirable, though on the other hand it is well known that the owners of choice flocks will rarely consent to sell, or let buyers *pick out*, their *best* sheep. This, I presume to be a fair view of the matter. It certainly is so, if I have been correctly informed, by those who ought to know. Suppose it to be so, it would naturally seem likely to put Mr. Jewett, indeed in possession of a "*variety*," in one sense of the word; i. e. a considerable *diversity* of *blood*. But it would probably leave something of a hiatus in the *pedigrees*, about which some awkward questions might arise, in case one was at all particular about *details*, or solicitous to see or know something about each and every link in the chain, so far at least as to know for a certainty that such links had actually existed, of any distinct and pure sort of blood. The question, (quite an interesting and important one too,) then arises, and remains to be solved; *how* and *when* did those various and mongrel sheep, get made up and melted down into Paulars, *pure Paulars?* How were they transformed? By what process, by what alchemy or magic, was it accomplished? Were they dyed in the wool? The question is, *how* was it done? *When* were they baptized into the great Paular family? I wait for a reply and full explanation in detail from Mr. Jewett himself, as he doubtless knows about it as well or better than any one else. I can not however but think, that it would be a "curious" and interesting chapter, could we get it. It is, I well know, very easy for Mr. J. to say (as he does,) that "a part of his sheep are a branch from a certain flock of Simon Pures, and the rest are from celebrated breeders, who *represent* them as pure descendants of the Paular, or old fashioned Merino." But in truth it will hardly do for Mr. Jewett to attempt to get off in this easy way. It is all very unsatisfactory. We want something more definite and tangible, something that is more reliable. What if it should turn out, that his "celebrated breeders," from whom he purchased his "pick ups," themselves got *theirs* in the same way, as doubtless they really did, and without knowing much if anything, about their blood or breeding; and *they* in turn of others, (as is more than likely,) of the same class of "celebrated breeders," who were equally careless and ignorant of the blood and breeding of their sheep, or at least, the best of them, neglectful of requiring and preserving good evidence as to purity of the blood. How would the matter of Jewett, Avery, and Randall's Vermont Paulars *then* stand! In such a case to talk of purity of blood, or of having any particular or distinct *breed* of sheep, will justly seem to your readers, very funny, as it is in fact, very ridiculous.

All this, it is true, might do very well, for a purchaser whose object was simply to stock a farm, with good, strong and healthy sheep, at a fair moderate price, and who would not be expected to pay much for *blood*, nor to be over-critical about the exact grade or degree of Merino blood, whether more or less pure. But when it comes to raising *rams* and selling them at good prices, for the use of the public, and talking and vaporing about them, as being pure-bred Merinos, "*pure Paulars*," and all that sort of thing, it becomes indeed quite another matter. For in the selection and purchase of male animals for the use and improvement of our choice and valuable flocks and herds, it becomes a matter of great consequence to get none but such as are *pure bred*, such as are known to possess good pedigrees, beyond any reasonable doubt. The great importance of this, is every day getting to be better understood and appreciated.

I would ask, *who* were Mr. Jewett's "celebrated breeders," those who laid the foundation of his *pure Paular* flock? We wool-growers, want their names and residences. Perhaps some of them may be known to us. I do not understand that all the sheep which he has picked up, were considered or known to be Paulars, nor even *called* such, *before* he bought them. But we have heard that there is much in "the magic of a *name*," and doubtless Mr. Jewett thinks so.

I do not complain at all of the means by which Mr. Jewett got together his flock of sheep. It was not a bad method. Indeed, to buy the best he could find around him, and to pick up a few occasionally, here and there, was perhaps about the *best* way he could have taken; but his error lay in afterwards claiming them to be *pure bred* Merino sheep, and thrusting them, as such, before the public, *under a popular specific name which did not belong to them.* It was this, that gave such an unpleasant awkwardness to his case, and of which, it can hardly by any ingenuity be divested.

Mr. Jewett says, that I "appear to arrive at my conclusions, from a description and picture of his ram, which appeared in the Albany Cultivator for August 1842." He then goes on to criticise with some severity, the portrait of the ram, and denies its truth and accuracy in some essential particulars. This is perhaps all very well; but how does it tally with what he himself said of the *same* portrait *at the time it appeared* in the Cultivator! He *then* said, without any reservation whatever, that it was "a very true picture"! Besides, you know we had in the Albany Cultivator for October 1842, at page 162, the certificate of the Reverend Royal A. Avery setting forth that *he was certain* that the portrait of Jewett's buck in the August number of the Cultivator, was, (to quote his words,) "a very *perfect* likeness"! This, however, is a small matter.

But it seems that Mr. Jewett *now* wishes to *shift* my observation, and that of the public, on to *another* ram, and a very different one from the former. In your October number, he says, "I would refer Mr. Examiner to the 2d Vol. of the N. Y. State Transactions of 1842, for a correct likeness of one of my stock bucks." Therefore as to *this* likeness, I presume there can be no mistake. I perceive it has also now just appeared in the Albany Cultivator for the present month. It is certainly a brave looking picture. The head and horns of this one are far better than the other, and more indicative of Merino blood, though even this ram, as pictured, has not the Merino form of *carcass* and carries but little, if any, resemblance to the peculiarities of the genuine *Paular* family. He is however, undoubtedly, a much better buck than the *other* one, of which we have spoken, and I should judge must be better bred. Doubtless he has *better blood*, and *more* of the *pure Merino* (of some sort,) than the other one has. For convenience sake, and for the purpose of distinguishing one from the other, let us call the ram which Mr. Jewett bought from Mr. *Hull* of Wallingford, No. 1, while the other (the new one,) we will, if you please, designate as Jewett's No. 2. I do not myself believe that these two rams are *very nearly* related to each other, if at all of the same family or blood. Will Mr. J. have the goodness to inform us in regard to it.

I would here inquire of Mr. Jewett, whether he himself, *bred* his ram No. 2. If not, *who* did? I am aware that Mr. H. S. Randall, in an elaborate defence and puff of Mr. Jewett's sheep, (another disguised ram advertisement, of the true Paular sort, headed as usual, with a decoy or catch-picture,) in the Albany Cultivator for present month (January,) says Mr. Jewett *did* breed him; and Mr. Randall goes on to mention, as if derived from, or by authority of Mr. Jewett, details and circumstances of Mr. J.'s selling the ram when a lamb, and afterward repurchasing him for $200, &c.; but I have, notwithstanding, also heard it intimated, and have good reason to believe, that Mr. J. did *not* breed the ram. Thinking that there must be some mistake in Mr. Randall's facts and details, and that that gentleman must somehow have been misinformed, I should like to know about it, from Mr. J. himself. I would also inquire of Mr. Jewett if he himself bred *both* the immediate *parents* of his ram No 2, or *either* of the parents of said ram? If not, who *did* breed them, or either of them? but more especially who bred the *dam*, the *ewe* that yeaned the ram No. 2? Is it *known* who bred her, and *where* she was bred, and what was her blood? If so, will Mr. J. please say who and where, and *what?* Was not the said *ewe* supposed to have been brought with other sheep from Long Island, or Rhode Island, or some part of Connecticut, without anything in particular being known of her with certainty, beyond the fact that she was "a good sort of an ewe," but with no knowledge whatever of her blood or breeding, nor as to whether she was (as Mr. Jewett says,) a "Paular, old Merino, or anything"?

As to the *sire* of Mr. J.'s ram No. 2, though certainly by no possibility a *Paular*, I am aware that he is said to have been of Jarvis' mixed blood; but precisely *what* that grade or mixture of blood then was, or now is, it would, according to all accounts, be pretty difficult, if not impossible, to say. Owing to one cause or another, it is beyond doubt or dispute, greatly changed and deteriorated in its character, from what it was originally, Mr. Jarvis' flock having become essentially *Saxon* in *constitution* and character of fleece. But *how* this assimilation to Saxon, this degeneracy or change for the worse, has happened or been brought about, whether by a Saxon cross, when that delicate sort were in vogue, or otherwise, I will not now undertake to say. There are different opinions in regard to it. But of the fact of their degeneracy and changed character, I believe there exists no doubt nor dispute among candid and experienced wool growers who have examined them.

Mr. Jewett appears to be pretty good at *asking* questions, let us now see if he is equally good at *answering* them. By replying, in a simple and direct manner, through your columns, at his earliest convenience, to the questions I have propounded to him previously and herein, he will oblige many of your readers, as well as

Your obedient servant,
EXAMINER.

New York, January 17th, 1844.

P. S. Besides furnishing us the name and residence of the owner of the 400 pure Paulars, from which he says, a *part* of his own flock is a *branch*, I hope Mr. J. will have the goodness to say *how many* of his sheep, precisely *what number*, were obtained "from that flock of Simon Pures," and whether his pictured rams, No. 1, otherwise called *Pedro*, and his new ram No. 2, or either of them, were of the number. Even if Mr. J. should not be able to furnish us the pedigrees of his *whole* flock, (which can hardly be expected of him in regard to such a mixed medley of sheep,) yet I do hope he will forthwith give us that of his pictured ram No. 2, alias "Fortune," all the particulars, chapter and verse, including most especially with fulness and accuracy, the pedigree of the buck's *dam*. We want to know all about the blood and breeding of that ewe. It can not of course require much time or trouble to furnish the pedigree of a *single* sheep, and of course so important a pedigree as that of his principal "stock buck," Mr. J. would be likely to have "all by heart" as the saying is, or at least where he could easily lay his hand on it. We will thank you for it, Mr. Jewett, if you please, and hope you will be so obliging as to furnish it *soon*, to the readers of the Agriculturist, many of whom are anxious to hear from you, about the pedigrees and *purity of blood* of your full blood, spurious, Vermont Paulars.

SOUTHERN CALENDAR FOR JULY.

As a general rule, give the cotton-crop its last working this month; some seasons the weeds will be too large to work with plows without injury even before the 10th. Keep the fields clean; if your intention is either rotation, or cotton to succeed cotton, it will save labor next year.

Pay particular attention to your tobacco-fields. When the plants have acquired from twelve to fourteen good leaves, and are about knee-high, begin to top them by nipping off the bud with the aid of the finger and thumb-nail. Take care not to destroy the small leaves near the buds, for if the land be good and the season favorable, the very top leaves will, in a short time, be nearly as large, and ripen quite as soon as the lower ones, whereby two or four more leaves may be saved; thus obtaining from sixteen to eighteen leaves in the place of twelve or fourteen. As the topping of the plants is essential, in order to promote growth, and to equalize the ripening of the leaves, this operation should be commenced the instant that the bud shows a disposition to go to seed; and should be followed immediately by removing the suckers as fast as they appear, which will now put forth at every leaf.

The blades from the early-planted corn can now be stripped for fodder. Let the shuck or husk on the ear change from the green to the whitish cast, then tie a handful or so to itself, and thrust the end of the tie between the ear and the stalk. Do not break down the stalks; for it will require more time to strip the blades, but in the end there will be a gain; for it can be got in sooner if a rain threatens, or if caught in a rain, it will not be injured so much. Cure the corn well before stacking. Late corn will need plowing in this month, and peas may be planted among it as directed in May.

The late plantings of potato drawings and the plantings of vines, will require plowing, and drawing up with a hoe; continue to plant out vines. If there is not ground enough in the potato patch, bed up ridges in the early corn-fields. Two furrows will do to plant on, which will not materially injure the corn; or plow up a choice piece of stubble ground anew.

Millet-grass must be cut when just turning, if for feeding, and treated in the same manner as stacking oats.

If your crop will admit of it, grub up small growth; cut down saplings; and deaden greens, for a calf pasture, to be sown in September or October with rye. Plowing will be unnecessary, the fall of the leaves will cover the ground, and the grain will spring up and give a fine bite for the winter. Make artificial pools in your pastures for stock, if there are no natural ones.

Prepare a turnep-patch, either old ground by manuring high and plowing, or a piece of new ground. The cotton-gathering season is now rapidly approaching; prepare basket and sacks to pick in, all leisure time, especially all wet days. Top cotton the last of this month, either by pinching off the tender top part of the plants, or cut off with a knife. Repair buildings, and fences about fields; rake up leaves and haul on the land; gather manure and house it under sheds or give it a coating of earth.

If there are showers, plant French beans; sow more endive; prepare the ground for transplanting cabbages that are coming on, in the last of this month. If the weather be very dry and the soil unfit to work, prepare drills two feet apart, and about eight inches deep, and pour into them some cow-dung water. Transplant your cabbages into those drills and leave them four or five days without watering. Then repeat the operation with the manure-water once more, and there will be no danger of the plants burning up. Should the season be rainy this precaution will be unnecessary. Sow more carrot-seed and proceed as directed in June.

NORTHERN CALENDAR FOR JULY.

Finish hoeing out your corn, potatoes, and all other crops, and make early preparation for harvesting. See that your tools are all in order, and a full supply of each. Get the best you can procure. A man may earn the extra cost of a good scythe or cradle, in a single day's work, besides the promotion of good morals, by the better humor he is kept it. Get rakes and pitch-forks which you know wont break by fair usage; by all means prepare a horse-rake, which may be made as simple as a hoe. A man with a steady horse, may do the work of 8 men with one.

Clover should be cut while just going out of bloom, when the heads are partially turned brown. It ought never to be spread. Let it lie in the swath till wilted: if they are very large or heavy, they may be turned over after the upper side is sufficiently dried. As soon as this is done, let them be raked into winrows, and soon after cocked in small high piles. This should always be done the first day, and if very hot, may be done within a few hours after cutting. Let it stand in these cocks till it has sweat and become cool, and comparatively dry. It may then be taken into the barn or stacked, and well salted. Lucerne is to be treated in the same way. Timothy and red-top should not be cut till the seed is in full milk, so that it will ripen after being cut. It ought never to get so ripe as to shell when fed out. These may be exposed to the sun longer than clover, but less than is usually practised. Our hay is frequently dried too much, and some who never spread their hay from the swath, much prefer it thus cured. It is better to allow it to cure in the cock, when it is always safe against sun, dew, and rain. Grass ought never to be exposed to the dew while spread. A few days of sun and dew while thus exposed, render it almost worthless. Hay may always be carried into the mow or stack sooner, by using salt freely: at the rate of four quarts to the ton is our rule. Besides lessening the risk from rain, the salt is always worth much more than its cost for the cattle and manure, and it will thus confer a triple benefit by answering successively the purposes of each.

Much of the wheat, oats, and barley may be harvested this month. The cleanest fields, or portions of them, should be selected for seed, but not the heaviest or largest growth. Seed is better if grown on moderately poor land, than on the best. Prof. Sprengel has shown from experiments, that grain matured on the richest land, though eminently fitted for food, contains too much gluten for seed; while that which is produced from poor land has a greater proportion of starch, which is the natural food for the young plant. The part thus selected should be allowed to mature the seed fully while standing; the grain intended for consumption, ought to be cut while the berry is yet soft, in the dough state. Such grain will produce more flour, and of a better quality than when dead ripe, besides being much less liable to shelling and waste. After moderate exposure to sun, rake up in bundles, or if well ripened, rake up at once, and bind soon after, when if it requires additional curing it may be finished in the shock. If put in stacks, these should be carefully placed beyond the reach of vermin, and so arranged as to have a circulation of air upward through the centre of the stack, to avoid mould and injury to the grain. The utmost care in stacking ought always to be used, to avoid injury from rain, and blowing down from high winds.

Kitchen Garden.—Cabbages of the several varieties can now be planted for late crops. Moist weather should be selected for this purpose, and the plants immediately and frequently watered, until they are well rooted. Melons, squashes, pumpkins, &c., ought to be carefully hoed, and kept entirely free from weeds; otherwise, they will not produce good fruit. Melons and cucumbers for pickles can be sown in the early part of this month. Sow kidney-beans, small salad, carrots, turneps, and spinach, for fall and winter use. Celery should be planted out in trenches; and some varieties of radishes and peas may be sown with reasonable prospect of success, if the season should prove moist. Egg-plants, peppers, and tomatoes, plant out, if not done before. Collect all the vegetable seeds that have come to maturity, and dry them well before putting away; also gather herbs as they come into flower, and dry them in the shade, that the sun may not injure their flavor. Pull up the stalks of beans, peas, &c., which have done bearing. Water may be frequently and beneficially applied, but it should always be done at the close of the day, otherwise the plants will be injured by the heat of the sun.

Fruit-Garden and Orchard.—Budding may be performed upon pears and apples the latter part of this month. Gather from the trees, and give to the cattle or swine, all fruit that is decayed or punctured by the insect, otherwise the insect, which now exists as a worm in the premature fruit, will soon be able to fly and attack the remainder. Also, continue to cut off all the wood as fast as it may appear to be infested by the insect which produces a black knot. Keep the ground well cultivated among the trees. There is very little else to be done in the fruit-garden this month, excepting it may be to consume its productions, for which directions may possibly not be requisite.

Flower-Garden and Pleasure-Grounds.—Bulbous and tuberous roots can now be taken up, and tulips, hyacinths, &c., carefully put away for planting in the fall. Herbaceous flowering-plants may still be transplanted from the seed-bed to the border, and should be taken up with as much earth as possible about the roots. Hedges can also be clipped in the early part of this month. Walks and borders keep constantly clear of weeds, and let a general air of neatness pervade every part of the garden.

FOREIGN AGRICULTURAL NEWS.

By the arrival of the steampacket Acadia, we are in receipt of our European journals to the 4th of June.

Markets.—*Ashes* have given way some and are dull of sale. *Cotton* has been gradually falling through the whole month of May, making a reduction of full ⅛*d.* per lb. from former prices. It is still ⅛*d.* higher than in the months of June, July, and August of the past year, but is now thought to have reached its lowest point. The import into England since the 1st January, is 518,000 bales, against 967,000 of same period last year. The stock on hand is 690,000 bales, against 855,000 last season at this period. The operations are large, but the prices without remarkable activity. *Flour* and *Grain* are in limited demand. In *Provisions* we see little change. *Beef* and *Cheese* rather more sought after. *Lard-Oil* scarce. *Naval Stores* in fair request. *Rice* remains firm. *Tobacco* flat, and sales fallen short the past month full 600 hogsheads.

Money continues abundant. Sir Robert Peel has brought into Parliament a new project for the charter of the Bank of England which will have some effect on the monetary affairs of the country: none of an unfavorable character, however, are anticipated. The bank has upward of £16,000,000 in its vaults, about $80,000,000!

American Stocks. These we are happy to say, since Pennsylvania has determined to pay future interest on its debt, are on the rise, and considerable activity is displayed in them.

Business generally is very brisk. All the manufacturing branches are particularly well employed.

The Weather has been dry and cold with some sharp frosts. Grass and potatoes will be short. Wheat and other grain crops look uncommonly promising.

American Pork.—It is certain that American pork can occupy the market when Americans are prepared to supply the article required. In order to effect sales of the most desirable lots of American pork that have been received, it has been necessary to unpack every cask, and trim and scrape, then scrub and wash in clean pickle each piece separately, and re-pack again in clean-washed salt, cutting the larger pieces into four pounds each, and at the same time carefully sorting the quality, so as to make the whole lot run uniformly with 50 pieces in each bbl., and adding a heavy capping of salt on the top, of 8 to 16 quarts. With the foregoing pains and expense, small lots have occasionally been disposed of, at 50*s.* to 52*s.* 6*d.* per bbl. Pork-hams in pickle are again admitted as salted pork legs, and subject only to the same duty as bbl. pork, viz: 8*s.* per cwt., and 5 per cent. additional.

Incendiarism.—We regret to see the burning of wheat and hay-stacks, and, indeed, barns and out-houses, still prevailing to a great extent throughout England. There surely must be some radical wrong toward the rural population, to incite them to such continued destructive acts.

Growing Mustard for Feed. and Enriching Soils.—I beg to hand you the following statement on the use of growing mustard for feed, or to plow in as a preparation for a wheat-crop. It is very palatable to all kinds of cattle, and I believe very wholesome. I think it far preferable to buckwheat, or any other vegetable with such rapid growth. I sowed 5 acres on the 11th of July last, on rather inferior land, of a light gravelly soil with chalk subsoil, where early turneps for wheat had failed. It should be drilled 5 inches apart, with 12 pounds of seed per acre. On the 25th of August I had measured portions cut in different parts of the field, and weighed, which, on a fair calculation, yielded 6 tons per acre—it was in full bloom—and the next day I plowed it in; which I consider, being full of vegetable matter, must be an excellent dressing for a wheat-crop. I would invite any friend to make trial of mustard on better land than mine; the expense being so trifling compared with buckwheat, which is 5*s.* per bushel, and requiring 2½ bushels per acre, would be 12*s.* 6*d.*; whereas 11 lbs. of mustard-seed, at 2*d.* per lb., the price it is now selling at, would be 2*s.* per acre.

Plum-Pudding for the Million.—Take half a pound of flour, half a pound of grated carrot, half a pound of grated potatoes, a quarter of a pound of suet, and a little seasoning. Mix them well together, and boil in a basin an hour and a half. You will then have a cheap and excellent plum-pudding for a trifle more than sixpence! Just try the experiment.

Salting Instrument.—So great is the pressure produced by Carson's patent instrument for salting and curing meat, equal, as is stated, to from 200 to 2,000 pounds upon a square inch, that a large joint may be salted by it in a few minutes, with half the quantity of salt usually employed. The meat, at the same time, it is said, is rendered more tender, and its nutritious properties retained. How great must be its utility to emigrants, captains of vessels, and residents in tropical climates, it is almost superfluous to mention. For general family use it will, however, be found highly advantageous.

Prolific Cows.—Mr. James Clapham, of West End Farm, Bramfield, has a remarkably fine Suffolk cow, which has been in his possession for seven years, and has during that time produced the extraordinary number of twelve calves—two at each birth—all of which it has brought up. Such regular and unvarying fruitfulness, for so long a period, is, we believe, without a parallel.

Another Prolific Ewe.—A few days ago, one of the ewes belonging to Mr. Spooner, Shuttington, near Tamworth, produced five lambs, which, with the prolific mother, are all doing well. This is her third year; last year she had four lambs, and the first year two.

Enormous and Prolific Cauliflower.—A cauliflower was gathered in the garden of Mr. Gutteridge, grocer, Hinckley, on Monday last measuring 30 inches in circumference, and weighing 10 lbs., and one nearly as large was cut from the same stalk last year. It is still kept in the ground, as it may produce another.

Wasps.—Peter Fry, Esq., of Compton House, has killed no less than 145 queen wasps within the space of six weeks, thereby preventing so many nests. An excellent and useful paper on the destruction of these insects was read at the monthly meeting of the Swansea Gardeners' and Amateurs' Society, by Mr. Webly, gardener to L. W. Dillywan, Esq., Sketty Hall. There are two species, the most destructive of which, both from its size and number, is the *vespa vulgaris*, or common wasp. It is important to know that the only portion of these insects which survive the winter are females, each of which in the spring erects for herself a nest in which to deposite her eggs and rear her young. Mr. Webly, therefore, proposes that a premium of one penny should be offered for every wasp that shall be captured in the months of April, May, and June; and three pence for every nest that shall be destroyed at any time afterward. The suggestion will doubtless be acted upon by grocers and every owner and occupier of a fruit-garden.

Warbles in Cattle.—A few applications of strong brine will at once destroy warbles in cattle, in whatever stage they may be found to exist; after which the animal will thrive better, and when it comes to be slaughtered, both the hide and the carcase will be more valuable.

Oil as a Manure.—All crops chemically considered are composed,

1st. Of mineral constituents, as a base, viz: of compounds of soda, potassa lime, and magnesia, with phosphoric, sulphuric, muriatic, and carbonic acids, also a little sulphur and iron, and other constituents are called the fertilizing ingredients of the soil, and are obtained by the plant from the soil only.

2d. Of gaseous constituents, viz: oxygen, hydrogen, nitrogen, and carbon, supplied to the plants in sufficient quantity by the atmosphere in the forms of water, carbonic acid, and ammonia, and form all the compounds obtained from plants in the form of gum, sugar, starch, and gluten, and exist in them in the proportion varying from 90 to 99 parts in the 100 of all growing crops, the remaining (from 1 to 10 parts) being mineral constituents.

That these gaseous constituents, though forming such a large proportion of all vegetable matter, are obtained entirely from the atmosphere and need not be added by the farmer.

That it is the presence in the soil of the mineral constituents only that renders it fertile and productive, by affording to the growing crops a sufficiency of these ingredients to form a proper and sufficiently strong plant in its young state, and by that means enabling it to take full advantage of the constituents supplied by the atmosphere, and so form a full-grown and healthy plant such as is required for the production of a good crop of grain.

That the most eminent agricultural chemists find that barren soils are deficient in these mineral constituents only, and that fertle soils contain them in abundance.

That, therefore, the whole secret of tilling the soil consists in the addition of the mineral constituents only, and in such proportions as are required for the crops to be produced, trusting to the atmosphere entirely for the supply of the gaseous constituents.

That oil is composed of gaseous constituents entirely, and can not give to the soil or crop any mineral constituents, but by its decomposition it affords a stimulating compound (ammonia) which forces the plant to excessive growth, and completely exhausts the soil of any mineral constituents that it may contain, and thus it is like a spur to a tired horse, in lieu of a feed of oats, and that land tilled with oil must soon become exhausted and nearly worthless.

Guano in the Island of Ichaboe.—It appears from an interesting article in the Glasgow Herald, that it was through the information of the master of an American whaler, at the Cape of Good Hope, given to Captain Farr, an Englishman, that the first cargo of guano was brought to this country from Ichaboe, by the latter, who has since made a second voyage to the island, and pointed out the way to other ships, in accordance with a negotiation entered into with their owners. The writer in the Herald thus concludes:—

At the time of Captain Farr's first visit, the island was covered with penguins, gannets, &c., but principally the former, in numbers which altogether defied calculation. They seemed to have no acquaintance with, nor fear of man, and in fact offered a resistance to his encroachment on a domain which had been peculiarly their own for thousands of years. Since the crews of so many ships, however, were located at the island, the birds have almost entirely deserted their former territory, and retired to fulfil the purposes of their nature in more remote and inaccessible shores. The specimens of the penguin from Ichaboe which we have seen are about two feet in height, and as a great portion of their time is spent in the sea, they are furnished with small flaps or paddles, instead of wings, which enable them to progress through the water with great velocity, though they are unable to fly. The female lays and sits upon one egg at a time, and a hole scratched in the deposite subserves all the purposes of a nest. In this way a succession of incubations go on for several months in the year, the young bird making its way to the sea as soon as it is able. It is the opinion of the seamen, however, that vast numbers of them never reach their destined home in the waters, but are crushed to death in their progress to it, by the dense battalions of birds which have almost to maintain a struggle for bare standing-room; and in this way the guano heaps are increased as well by the bodies of their birds as by their droppings. The bodies of seals are also found on the surface of the guano deposites, which leads to the belief that they may have occasionally taken shelter there from a storm or hurricane, and having been overpowered by the potency of the ammoniacal vapor, have been unable to return to the water, and died where they lay.

The guano which is brought to this country is found under a loose covering of decayed birds, recent dung, &c., and it is so firmly imbedded that it requires to be dug out by the laborious operations of the pick-axe. When thus disengaged it is put into bags, and transferred by means of a sort of rope-ladder, from the island to a boat, which lies at the outer edge of the surf, and thence it is daily emptied into the hold of the vessel, which is anchored at a short distance. Ten men will lift about fifteen tons per day, but the operation is a very laborious one, and the sun is so powerful that few of the crews escape without having their faces and hands blistered so that the outer skin is peeled off. The trip to or from the island extends to from fifty-five to seventy days, or, including the time necessary to take in a cargo, a voyage out and home extends to from six to seven months. When Captain Farr left Ichaboe he estimated the guano deposite on that island alone to extend to one thousand feet in length, by five hundred feet in breadth, with an average depth of thirty-five feet, containing, perhaps, from 700,000 to 800,000 tons. It is evident, therefore, that this supply will soon be exhausted in fertilizing the soil of Great Britain and her dependencies, but it is to be hoped that vast stores of it yet exist, which have hitherto never been disturbed by man. On this subject we quote the following cheering statement from the South African Commercial Advertiser, published at Cape Town in January last:—

"On the rocky headlands, or on the rocky and unmolested islands on the west coast, both within and beyond the boundary of this colony, where the sea-fowl, from a vast expanse of open ocean, come to breed, enormous masses of this manure have recently been discovered; and it seems probable that all the way up the coast into the gulf of Guinea, and beyond it, similar treasures await the agriculture of the world, by which means the sea will render back to the land much more matter fitted to form organized, that is, vegetable and animal substances, than the rivers carry down into its depths, or the fleets of the nations deposite in their course over its surface."—*New Farmers' Jour.*

The Shirt-Tree of America.—In the forests of the Oronook, there is a tree which often attains the height of fifty feet. The natives make shirts of the bark of this tree, which requires only to be stripped off, and to be deprived of its red and fibrous parts; the shirt is thus formed without seam. The head is thrust through one end, and two lateral holes are cut to admit the arms; the natives wear these shirts in the rainy seasons, which, according to Humboldt, are equal to any of our Macintoshes for keeping out the wet.

Editor's Table.

Stealings.—With all due deference and respect to exchange papers, and with as much of the *suaviter in modo* as the nature of circumstances will admit, we beg leave to say, that we fear, in process of time, we shall be under the necessity of coming to the *fortiter in re*, and characterize things by their proper names. During the month of May last, we counted up in different exchange papers, twenty-seven articles STOLEN from our February, March, and April numbers of this year, placed in their columns without credit; and during the past month we think we have observed quite half as many more. Besides all these, our friends inform us of some others which we have not had time to look over. Verily this is an *honest* world, and the printer's devil is a shining or rather a BLACK light in the way of an *examplar* in it. But the beauty of all this honesty is, nine times out of ten, when these THIEVINGS (we beg pardon, we are disposed to be polite, we only mean STEALINGS) are pointed out to them, they take no sort of notice of the matter, and never stoop to make a correction. They seem to reason like a certain corporation we wot of, which was thus—"It was indeed a great *wrong*, but having been done, we don't see how it can be made *right* by an acknowledgment." If we should call names hereafter by way of letting the world know who is *not* guilty, we think it will be nothing more than is due to the honest and honorable. Let those, therefore, cabbaging without ceremony from other people's cribs, hereafter beware; we had just as lief they would filch our purse as filch our paper—the one is no more stealing than the other.

Early Prairie-Breaking—Shallow Plowing.—A writer in the Prairie Farmer contends, that breaking up in May is much better than later, and plowing 2½ inches deep has proved more beneficial than 4 inches. The reason of the latter, is, that the harrow tore the sod of the shallow plowing more easily than that turned over deeper. Not long since we saw some plows destined for the west, with peculiar flat cutting shares, with which the purchaser informed us he intended plowing his prairies about 2 inches deep, by cutting off the tops of the sod, and turning it flat over. Will any of our friends at the west informs us whether this is a successful practice?

South Down Sheep taken for Leicesters.—We are somewhat surprised that the sharp editor of the Massachusetts Plowman does not know a South Down sheep from a Leicester. Why, we should just as soon think of his taking a rhinoceros for an elephant.

Poisoned Sheep.—A writer in the Maine Cultivator says, that sheep poisoned by eating *laurel*, or lamb-kill, may be cured by a liquor made by boiling the twigs of the white ash for an hour, first bruising the twigs, then give two spoonfuls to each sheep. He says it is a certain cure if it is administered in twenty-four hours.—*Mass. Plowman.*

Soap-Suds a Preventive for Shedding Milk.—A farmer from Stoughton told us last week, that washing the ends of cows teats in strong soap-suds, would prevent the shedding of her milk before the time of milking. Perhaps it tends to contract the ends of the teats.—*Ib.*

Premium Cotton.—We perceive that the Chamber of Commerce, at Apalachicola, has awarded an elegant silver tea-set to Col. Alexander McDonald of Eufaulla, Alabama, as a premium for the best lot of 20 bales of cotton sold last season in the market. It was classed *fine*, no other lot classing over *good fine*. In addition to this, Col. McD. had the solid satisfaction of receiving 10½ cents per lb. for his premium cotton. We do not know what other cotton was worth at the same time, but presume not over 6 to 7 cents. If any one wishes to learn how Col. McD. succeeds in raising such superior cotton, let him turn to our last number, page 179, and he will see that one means he adopts, is reading agricultural papers; the whole expense of which for 20 years, is doubtless repaid him in the value of the above premium, and the extra price obtained for these 20 bales of cotton. Reader go thou and do likewise.

To Destroy the Curculio.—Previous to 1841, several of my plum-trees had been so attacked by this insect that I scarcely obtained a ripe plum. Early in the spring of that year, as soon as the blossom-buds began to swell, I removed the soil around the tree to the depth of two or three inches, and as far on all sides as the limbs extended. I then deposited in the opening a layer of lime, recently slaked and still warm, about half an inch in thickness. The soil was immediately restored to its place over the lime, and closely pressed down upon it. I had an abundant crop of well-ripened plums. In the spring of 1842, I again applied lime in a similar manner, and with the same success.

In the autumn of that year, it was stated in some agricultural journal, that salt sprinkled around the tree in sufficient quantities to render the ground *whitish*, would prevent the ravages of the curculio. In 1843 I made the experiment. The trees blossomed well and showed an abundance of fruit; but every plum was attacked by this insect and fell to the ground.

I intend to apply the lime again the present spring; and if I obtain a good crop of ripe plums, my confidence in this remedy will be strong.—*Boston Cult.*

Big Grain Rice.—Mr. Ward in the Southern Agriculturist says, that he planted half an acre of new land with this at Longwood in the spring of 1841, which yielded in the autumn 49½ bushels of clean winnowed rice. In the year 1841, this product was sown in a 21-acre field at Brook Green, which yielded in the autumn, 1,170 bushels of sheaf-rice, clean winnowed. Of this quantity, from 150 to 200 bushels were milled, and sent to market. My factors disposed of it at a considerable advance beyond the highest market price. In the year 1842, I planted 400 acres with this seed, and being so perfectly satisfied with both the product and the improved quality of the same, I was induced in the succeeding year (1843) to sow with it my entire crop. The first parcel, when milled, consisting of eighty barrels, netted *fifty cents* per cwt. over the primest new rice sold on the same day.

Marling Light Sandy Soil.—In the same paper Mr. Hammond gives the following results of an experiment in marling:—

Unmarled acre,			361 lbs. seed cotton.				
100	bushels	do.	451	do.	Increase	90 lbs.	24.9 per ct.
200	do.	do	384	do.	do.	23	6.3 "
300	do.	do.	173	do.	decrease	188	52 "

The land, being very old, is bare of vegetable matter for marl to act on, to which more than to the texture of the soil, inferior as it is, I attribute the failure of any great improvement from it. I make the statement, however, because it is valuable in many respects. It shows the danger of heavy marling on worn land without previous rest or manure. The acre with three hundred bushels has been destroyed. There is one rich spot, the bottom of a small basin in the centre of it, which produced nearly all the cotton gathered. On the rest of it the weed mostly died as soon as it came up—one hundred proves a better quantity than two hundred bushels, and perhaps a little less would have been still better on this soil—at least to begin with. All the lightest land in the fields marled with two hundred bushels was evidently injured and now requires help. I anticipated this effect from what I saw last year, and reduced the quantity to one hundred and fifty bushels on all the land then marling. I have reduced it now to one hundred bushels, and shall hereafter marl at that rate. I prefer to go over it again after I have finished all, and give it what it may prove itself able to bear after resting once or thrice.

The crop of this year has satisfied me perfectly that cotton will mature at least a fortnight earlier on marled than on unmarled land.

Another unexpected effect of marl it may be worth while to state. I commenced in the spring of 1842 to put it in my stable, pretty freely for the purpose of improving my manure. I did not think of its having any material effect on the health of the mules. But I have had but little sickness among them, and have not lost one since, while previously I lost on the average four annually, and never in any year, less than two. I attribute this change in a great measure to the absorption of noxious gases by the marl.

I am now marling as actively as heretofore, and I esteem it so beneficial that I have this summer marled a field of over two hundred acres, the average haul of which is three miles from my landing: and being tolerable fresh land that has rested this year, and was sowed in oats last year, which were not cut but grazed down after ripening, I have put on a hundred and fifty bushels.

Mode of Applying Guano.—1. It should never be applied in contact with seeds, as it kills them as soon as they begin to vegetate.

2. It should be mixed as equally as possible with about four times its bulk of finely pulverized earth, or peat-ashes, (cold.) If sand is used, about twice its bulk will be sufficient.

3. The quantity per acre may vary from two to four cwt., according to the nature and quality of the land. Recent experiments have shown that a quantity which proved highly beneficial in poor soil, became deleterious upon land previously rich.

4. The best time for applying it is shortly after vegetation has commenced, and immediately before rain, or during damp warm weather.

5. The best mode of application is, to divide the quantity per acre into two or three equal parts, and sow them broadcast at intervals of about ten days or a fortnight.

6. For small allotments it may be more convenient to use it in a liquid state—in which case, mix 4 lbs. of guano with 12 gallons of water, and let it stand for 24 hours before being used. The same guano will do for mixing again with the same quantity of water, after the first is drawn off.—*London Gar. Chron.*

Great Fecundity.—A gentleman of this city, of the highest respectability, called at our office a few days since, and stated that a sow on his farm in the neighborhood had the evening before given birth to eleven fine full grown pigs, and that about twelve hours after, she produced another litter of ten, about three fourths matured—evidently the result of a second conception.—*Southern Planter.*

To Preserve Eggs.—Take 1 bushel of quick lime, 2 lbs. of salt, 8 oz. of cream of tartar, mix the salt with as much water as will reduce the composition to a consistency that an egg will swim in it when put in. Eggs are thus preserved two years.—*Ellsworth's Report.*

Simple Mode of Purifying Water.—It is not so generally known as it ought to be, that pounded alum possesses the property of purifying water. A tablespoonful of pulverized alum, sprinkled into a hogshead of water, (the water stirred at the time,) will after a lapse of a few hours, by precipitating to the bottom the impure particles, so purify it that it will be found to possess nearly all the freshness and clearness of the finest spring-water. A pailful, containing four gallons, may be purified by a single teaspoonful.—*Southern Planter.*

Protection of Peach-Trees from Worms.—Screenings of anthracite coal are a good protection of peach-trees against worms. Place around each tree, a box two feet square and six inches deep, and fill it with coal, and they will have no indications of worms around them.—*Morristown Jerseyman.*

To Destroy Worms in Peach-Trees.—Scoop the earth from about the root of the tree, so as to form a bowl to be 18 to 24 inches from the tree; do this about the first of September; let it remain so until the first of December; then fill the bowl level with wood-ashes; I have used leached ashes with uniform success; I have no doubt that lime will do as well or better than ashes. By exposing the roots to the sun and air, the propagation of the worm is checked.—*Louisville Journal.*

THE CHEMICAL AND PHYSIOLOGICAL BALANCE OF ORGANIC NATURE. An Essay, by J. Dumas and J. B. Bousingault. Edited by D. P. Gardner, M. D., Lecturer on Agricultural Chemistry, &c. From the third edition, with new documents. Published by Saxton & Miles, 205 Broadway—price 50 cents.—The above is a valuable little work of 174 pages, and is prefatory to a more detailed and elaborate treatise which is in press from the same authors, and will soon be published. We can not present a better idea of the one before us, than in an extract from the preface by M. Dumas. "This essay presents a variety of new views, calculated to supply general physiology, medicine, and agriculture, with grounds upon which the study of the chemical phenomena that take place in organized beings may be advantageously pursued." Dr. Gardner has added a few notes, thereby much enhancing the value of the American edition.

THE ECONOMY OF WASTE MANURES: A Treatise on the Nature and Use of neglected Fertilizers, by John Hannam of Yorkshire, England. Carey & Hart, Philadelphia—price 25 cents. Here we find within the compass of 94 pages, where invaluable fertilizing materials now usually going to waste may be had; such as liquid drainings from cattle-sheds and manure-heaps—sewerages of towns—waste of manufactures of woollen, flax, soap, gas, sugar, tanning, &c., &c. Most of these substances have too long been considered mere nuisances, not only in England, but in this country, and the public should be obliged to the author of the above work for calling attention to their value for the farmer, in the clear forcible manner in which he has done it, for they are among the cheapest manures, and most highly-fertilizing materials that can be found, to enrich his lands and increase his crops.

TO CORRESPONDENTS.—T. F. When you solicit a favor which is of no earthly interest to the person addressed, and which gives him considerable trouble, it would be no more than fair at least to *pay your postage.* Our purse (we speak not of our time) is too often taxed in this way by correspondents, who will do well to remember this, and consider it as a general hint to all concerned. We have inserted an advertisement, which is the best method we know of for effecting your object. There will be no charge for the same.

Dear Mr. Tioga. As a member of one of the committees in question, we had no confidence in our knowledge or ability to make a satisfactory report, and therefore forbore doing so. We presume others came to the same conclusion, as we have seen neither hide nor hair of said convention, nor any reports of its doings since it adjourned in this city last October.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, JUNE 25, 1844.

ASHES, Pots,	per 100 lbs.	$4 19	to	$4 25
Pearls.	do.	4 50	“	4 56
BACON SIDES, Smoked,	per lb.	3½	“	4½
In pickle	do.	3	“	4
BALE ROPE	do.	6	“	9
BARK, Quercitron	per ton	23 00	“	24 00
BARLEY	per bush.	60	“	62
BEANS, White	do.	1 25	“	1 75
BEEF, Mess	per bbl.	5 00	“	7 00
Prime	do.	3 00	“	5 00
Smoked	per lb.	5	“	7
Rounds, in pickle	do.	3	“	5
BEESWAX, Am. Yellow	do.	28	“	31
BOLT ROPE	do.	12	“	13
BRISTLES, American	do.	25	“	65
BUTTER, Table	do.	12	“	15
Shipping	do.	8	“	12
CANDLES, Mould, Tallow	do.	9	“	12
Sperm	do.	29	“	38
Stearic	do.	20	“	25
CHEESE	do.	3	“	7
CIDER BRANDY, Eastern	per gal.	35	“	40
Western	do.	25	“	40
CLOVER SEED	per lb.	7	“	8
COAL, Anthracite	2000 lbs.	4 25	“	5 25
Sidney and Pictou	per chal.	5 75	“	6 25
CORDAGE, American	per lb.	11	“	12
CORN, Northern	per bush.	47	“	48
Southern	do.	45	“	46
COTTON	per lb.	5	“	10
COTTON BAGGING, Amer. hemp	per yard.	16	“	18
American Flax	do.	15	“	16
FEATHERS	per lb.	28	“	33
FLAX, American	do.	8	“	8½
FLAX SEED, rough	per 7 bush.	9 00	“	9 75
clean	do.	10 00	“	10 50
FLOUR, Northern and Western	per bbl.	4 31	“	4 75
Fancy	do.	5 00	“	5 25
Southern	per bbl.	4 25	“	4 75
Richmond City Mills	do.	6 25	“	6 50
Rye	do.	2 75	“	3 12
HAMS, Smoked	per lb.	5	“	10
Pickled	do.	4	“	7
HAY	per 100 lbs.	30	“	32
HIDES, Dry Southern	per lb.	9	“	11
HEMP, Russia, clean	per ton.	180 00	“	185 00
American, water-rotted	do.	140 00	“	180 00
do dew-rotted	do.	90 00	“	140 00
HOPS	per lb.	7	“	9
HORNS	per 100	1 25	“	5 00
LARD	per lb.	5½	“	6½
LEAD	do.	3½	“	4
Sheet and bar	do.	4	“	4½
MEAL, Corn	per bbl.	2 50	“	2 75
Corn	per hhd.	12 00	“	12 50
MOLASSES, New Orleans	per gal.	29	“	31
MUSTARD, American	per lb.	16	“	31
OATS, Northern	per bush.	29	“	30
Southern	do.	26	“	27
OIL, Linseed, American	per gal.	73	“	75
Castor	do.	90	“	95
Lard	do.	55	“	60
OIL CAKE	per 100 lbs.	1 00	“	— —
PEAS, Field.	per bush.	1 25	“	— —
PITCH	per bbl.	1 12½	“	1 37
PLASTER OF PARIS	per ton.	2 37	“	2 50
Ground, in bbls. of 350 lbs	per cwt.	1 12	“	— —
PORK, Mess	per bbl.	8 25	“	10 00
Prime	do.	6 00	“	8 00
RICE	per 100 lbs.	2 75	“	3 25
ROSIN	per bbl.	58	“	75
RYE	per bush.	67	“	69
SALT	per sack	1 31	“	1 50
SHOULDERS, Smoked	per lb.	4	“	6
Pickled	do.	3	“	4
SPIRITS TURPENTINE, Southern	per gal.	30	“	32
SUGAR, New Orleans	per lb.	5	“	8
SUMAC, American	per ton	25 00	“	27 50
TALLOW	per lb.	6	“	7½
TAR	per bbl.	1 44	“	1 56
TIMOTHY SEED	per 7 bush.	11 00	“	14 00
TOBACCO	per lb.	2½	“	6½
TURPENTINE	per bbl.	2 19	“	2 56
WHEAT, Western	per bush.	90	“	95
Southern	do.	95	“	1 90
WHISKEY, American	per gal.	22	“	24
WOOL, Saxony	per lb.	35	“	50
Merino	do.	35	“	40
Half-blood	do.	25	“	30
Common	3do.	20	“	25

New York Cattle Market—June 24.

At market, 1100 Beef Cattle, 325 from the north; 120 Cows and Calves, and 2500 Sheep and Lambs.

PRICES.—*Beef Cattle.*—No alteration, except an increased dulness. We quote for retailing sorts at $5.50, a $6.50, with occasionally an extra beast at $7; unsold 250.

Cows and Calves.—Sales at $14 a $28. Left over 20.

Sheep and Lambs—A large offering, but nearly all sold at $1.25 a $4 for sheep, and $1 25 a $2.75 for lambs. Unsold 150.

Hay—An abundant supply at 56 a 67 cents per cwt. for loose by the load.

—

REMARKS.—*Ashes*, after the late fall of prices, are now firm. *Cotton* has further declined ⅛ to ¼ cent per lb. since the arrival of the Acadia. Export from the United States since 1st September last, 1,425,383 bales; same time last year, 1,884,948; same time year before, 1,340,894. *Flour* is dull. *Wheat*, the same. *Corn* and *Rye* more active. *Hay* is pressing upon the market, and is slow of sale. *Molasses* and *Sugar*, quiet. *Provisions*, without change since our last. *Rice* and *Tobacco*, in moderate demand. *Wool*, the transactions, especially in the country, are brisk, and prices rule from 30 to 40 per cent. higher than last year at this time, which will make the handsome additional difference of about $3,000,000 to go into the farmers' pockets.

Money the same as at our last.

Stocks are perhaps a trifle lower.

The weather has been more or less cold and rainy in June, but this has not seemed to deter the ripening of the crops, which are unprecedently early. Most of the Wheat and Rye south of Delaware is secured, and proves a large yield. The Hay harvest is going on briskly all around us, and the cut proves of a good quality and very abundant. Cotton, Corn, Hemp, and Tobacco are looking well, and the root-crops throughout the country promising in the extreme. There has been a continued loss on the bottoms of the upper Mississippi and some of its tributaries, especially the Arkansas and Red rivers, from their overflowings; in other parts of the south the drought still continues, and the attacks of the *aphis gossyphii* or cotton-louse have been quite destructive in some districts, cutting short the crops materially; but the whole average promises to be a good one. West we hear considerable complaint of destruction of the wheat from the fly, rain, and rust; yet, notwithstanding all these offsets, we are of opinion that the crops generally will be uncommonly abundant on the average throughout the country.

GREAT SALE OF ELECTORAL SAXON SHEEP.

The undersigned will sell at vendue, the two flocks of *pure Electoral Saxon Sheep*, belonging to the estate of the late Henry D. Grove, as follows: 1st. That at Granger, Medina county, Ohio, consisting of about 400 sheep, on the 30th Sept., next, on the farm now occupied by them. 2d. The home flock at his late residence in Hoosick, Rensselaer county, N. Y., consisting of about 350 sheep, on the 15th Oct., next. A rare opportunity is offered to those who may be anxious to improve the quality of their flocks. The following is the opinion of the distinguished manufacturer who has usually purchased Mr. Grove's wool, of the character of these flocks:—

"The purest blood in this country was introduced by the late Mr. Grove in his own flocks, the wool of which I have been familiar with since their importation in 1827. In point of fineness and admirable *felting* qualties, this wool is unsurpassed by any flock in this country, and the fleeces average about half a pound each more than any other I am acquainted with."

SAMUEL LAWRENCE.

Lowell, April 9. 1844.

The terms of the sales will be cash. Reference, Samuel Lawrence, Lowell, Mass., or the subscribers.

ELIZA W. GROVE,
W. JOSLIN, } Administrators.
S. A. COOK.

Buskirk's Bridge, N. Y., April 20, 1844.

JUST PUBLISHED,

COLMAN'S AGRICULTURAL TOUR.

The first part of Rev. Henry Colman's Report on European Agriculture and Rural Economy, is received. The work will be completed in ten numbers, at $5,00, $2,00 to be paid on the delivery of the first number. SAXTON & MILES,
205 Broadway.

ARTIFICIAL GUANO.

The subscriber has the best of Artificial Guano for sale, at $1 per box of 20 lbs. weight, $5 per barrel of 250 lbs., and $40 per ton, loose, delivered on board vessels lying at this port.

The above manure has been tried in this vicinity and is much liked. It is especially suited for plants in pot or conservatories, as well as the nicer parts of the garden; it is also highly approved of on the farm. For best method of applying Guano see pages 98 and 222 of this paper. A. B. ALLEN, 205 Broadway.

AGRICULTURAL AND BUSINESS AGENCY.

Knowing the convenience that such an agency will be to his distant friends, the subscriber offers his services for the purchase of Wagons, Carriages, Match and Single Horses, Cattle, Sheep, Swine, Agricultural Books and Implements, Seeds and Merchandise of any kind; also, the buying and selling of land, the payment of taxes, &c., &c.

From his long experience as a farmer and stock-breeder, and general acquaintance with lands and merchandise, the subscriber trusts that he shall be able to give general satisfaction. The commission charged for his services in purchasing or selling, will be moderate. Cash or produce must invariably be in hand before orders can be executed.

A. B. ALLEN, 205 Broadway, New York.

A PROFESSOR OF SCIENTIFIC AGRICULTURE AND MATHEMATICS.

The Trustees of Franklin College, situated at Elm Crag, near Nashville, Tennessee, are desirous of engaging a Professor as above. A graduate of a college would be preferred, and one who understands French and German. Five hundred dollars with his board will be guaranteed the first year, with a probable increase of this sum thereafter. Address T. Fanning, Nashville, Tenn.

MADDER SEED.

The very high prices which the Madder Dyes of France and Holland have attained, are sufficient to excite the attention of our intelligent agriculturists. It is only necessary to take into consideration the immense quantity of Madder consumed in the various manufactories of the United States, to be convinced that the cultivation of this plant would be attended with great advantages, and that it may be undertaken with certainty of profit.

The Madder root can be cultivated in almost every climate. The sands of Silesia, the marshes of Zealand, the arid soils of the south of France and Persia produce it, and of almost equally good quality. It is well known that atmospheric influences make but little impression upon a root, the valuable part of which grows beneath the surface of the soil; and what a powerful guarantee does this circumstance afford to the cultivator of the Madder. It protects him from all varieties of temperature, which so frequently destroys crops of a different nature. For those who cultivate this root, a crop is assured as soon as the seed which they have put into the ground begins to germinate.

A special report upon the cultivation of this plant was laid before the Academy of Sciences at Paris, and a prize awarded to the author. It was written by M. de Gasparin, Peer of France, Member of the Institute, and formerly Minister of the Interior. French Madder Seed, obtained from last year's crops, may be had of the subscribers, who have received a consignment of a considerable quantity. Price $1 per lb., or at reduced rates when a quantity is taken. J. M. THORBURN & CO, 15 John st., N. Y.

AGRICULTURAL IMPLEMENTS, &c.

The subscribers are agents in this city to sell the following celebrated Machines, viz:

Hussey's Premium Corn and Cob-Crusher, price from	$25 to $40.
Dickey's " Fanning-Mill, "	$20 to $30.
Platt's " Portable Grist-Mill, &c.,	$30 to $100.
Also for sale, Hovey's Premium Straw-Cutter, (spiral knives,) prices from	$15 to $25
Warren's Premium Straw-Cutter,	$15 to $25
Hull's Cornstalk and Straw-Cutter,	$20

Being proprietors of the now celebrated "Warren's Improved Portable Horse-Powers and Thrashing-Machines," they continue to manufacture and sell them with increased success. Some twenty gentlemen having been present at an exhibition of the operation of these machines, state that "having witnessed the practical utility of 'Warren's Improved Horse-Power and Thrashing-Machines,' they cheerfully recommend them to the attention of agriculturists as the most perfect inventions of the character that have ever fallen under their observation."

With the Two-Horse Machines, 30 bushels of oats or barley is easily thrashed per hour, and wheat and other small grain in proportion, clean and excellent, leaving the straw *unbroken* so that it may be gathered into bundles; and not more than three persons are required to tend them. One, two, and four-horse Machines are manufactured. Prices very low. Two-Horse Power and Thrasher together only $75.—One-Horse $60.—Four-Horse from $100 to $110. Terms, cash in this city on delivery. Liberal deductions made to dealers on all kinds of such machines as we sell.

L. BOSTWICK & CO.,
146 Front street, New York.

THORP'S THREE-SHARE PLOW.

One of Thorp's Three-Share Plows, for which a premium was awarded at the late Fair of the American Institute, for sale, price $10. Inquire of the Editor of the American Agriculturist, or at the office of the American Institute in the Park. 2t

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 miles, without the State.

ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume I. and II. of THE AMERICAN AGRICULTURIST, with tables of contents complete, for sale at $1,00 each; elegantly bound in cloth, $1,25. These are handsome, tasteful books, and make very desirable premiums for distribution with Agricultural Societies, and should also find place in all our District School Libraries. They constitute the best and most complete treatise on American farming, stock-breeding, and horticulture, extant. When several copies are ordered, a liberal discount will be made.

☞ To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster.

Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway. New York. ☞ F. W. Wilcox, travelling agent.

SULPHATE OF SODA.

A maker of Sulphate of Soda has requested me to offer the article, fine-ground, at about one cent per pound. Any farmer, desirous of trying the article, can obtain a supply by calling at 34 Cliff street, N. Y. Extracts from Professor Johnston's work on Chemical Manures, as to the value of this sulphate, will appear in May number of the American Agriculturist.

2t WM. PARTRIDGE.

PREMIUM EAGLE, SUBSOIL, AND OTHER PLOWS.

The subscriber having been appointed agent in this city for the sale of the celebrated Premium Plows, made by Ruggles, Nourse, & Mason, of Worcester, Massachusetts, now offers them at the manufacturers' home prices. They are calculated alike for the northern farmer and southern planter, and embrace every variety, Cotton and Rice plow, Stubble, Sod, Road, and Subsoil. Prices from $3,50 to $15,00, according to the kind.

The great number of premiums which these plows have obtained at the most important plowing-matches, and the universal satisfaction they have given wherever introduced, render it unnecessary to particularise their merits. They are made of the best materials, are highly finished, and combine light weight and easy draught, with great strength and durability.

A. B. ALLEN, 205 Broadway, N. Y.

CONTENTS OF JULY NUMBER.

	Page.
Cutting Grain, American Agriculturist Almanac,	193
Farm of the Messrs. Lathrop,	194
Cutting Hay,	195
Large Conservatory,	196
New York Farmers' Club, Stirring the Ground in Dry Weather, Show of the Ag., Hort., and Botanic Soc. of Jefferson College, Thomas Affleck,	197
Polled Grade Durhams, John W. Knevels,	198
Review of Mr. Dana's Geology of Soil, Wm. Partridge,	200
Profits of Poultry, C. N. Bement,	201
Culture of Tobacco, No. 2, D. P. Gardner,	202
Culture of the Sugar-Cane, No. 2, Thomas Spaulding,	204
The Physician an Agriculturist, Putnam,	206
Massachusetts Farming, A Traveller,	207
Budding, D. Jay Browne,	208
Norman Horse Diligence, Central Farmer,	209
Keeping Fowls in Winter, Henry A. Field, Eggs Hatching after Transportation, Chas. H. Tomlinson,	210
Organic Improvement of Domestic Animals, D. Lee,	211
Southern Products, A Northern Farmer,	212
Pigs Sucking a Cow, Jos, C. G. Kennedy,	213
Mineral Phosphate of Lime, R. L. Allen,	214
Paular Merinos, No. 5, Examiner,	215
Southern Calendar for July,	217
Northern do. do.	218
Foreign Agricultural News, Guano, &c.	219
Editor's Table—Stealings—Marling Light Sandy Soils—Mode of Applying Guano, &c.	221
Review of the Market,	223

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. III. NEW YORK, AUGUST, 1844. NO. VIII.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway

TO EXCHANGE PAPERS.

When anything appears in these which is designed to attract our attention, we wish it conspicuously marked with ink lines, and the paper folded up with the article outside, so that it will instantly meet our eye. We do not often open, much more read, one in twenty of our exchanges; for we have not the time to do so, and if articles hereafter are not marked and folded as directed, it will not be our fault if they remain unnoticed.

WEEDS.

Now is an excellent time to destroy weeds, as the rankest and most pernicious of them are in flower, and you thus prevent their seeding your own and neighbors' land. If cut down close to the ground in full bloom, some kinds will be totally destroyed; others will not rise again that year, or if they do, so feebly as to do little injury, and there is no danger of scarce any running to seed. The most effectual means which we have found to destroy the hardier weeds, such as mulleins, thistles, burdocks, &c., is to place half a table-spoonful of salt upon each stem immediately after being cut close to the ground. If there be a great number, after mowing them, scatter salt plentifully upon the land, pasture sheep there, and they will most invariably be destroyed in a season or two. The salt acts beneficially with the sheep-dung in enriching the land. To increase the feed, plaster may be sown at the rate of 1½ to 2½ bushels per acre.

PLASTER NO LONGER BENEFICIAL.

When in Putnam county, and other places the past month, we heard complaints among the farmers that gypsum (plaster of Paris) no longer acted beneficially upon their land. The reason of this is thus explained by Leibig:—

"When we increase the crop of grass in a meadow by means of gypsum, we remove a greater quantity of potash with the hay than can under the same circumstances be restored—hence it happens, that after the lapse of several years, the crops of grass on the meadows manured with gypsum diminish, owing to the deficiency of potash."

From the above extract it will be seen that nothing is wanted but the application of ashes or potash to the land, when plaster will again act upon it with its former good effects. Plaster will also be found beneficial again after manures have been used for a few years, more especially when made of an intermixture of swamp-muck or peat-earth.

FARM OF MR. CLIFT.

This farm contains 300 acres, and is situated on the south side of the town of Carmel, in Putnam county, about 14 miles east of Peekskill landing, on the Hudson. In common with most of the land in that part of Putnam, it is broken and rough, and abounds with ledges of rock and loose stones. Such a country as this is particularly agreeable to one fond of the wild and picturesque; but to the farmer of rich alluvial plains, the idea of ever cultivating it would seem somewhat appalling—a thing to be talked about rather than performed. Yet cultivated it is, and in good style too, and what is most surprising to him who first takes a cursory view of the country, it is done at a handsome profit. The stone on the surface is usually not more than sufficient for the requisite fences, and when these are picked up and laid into walls, the land is clear enough for plowing; it is then got into grass as soon as possible, by a proper rotation of crops, and thus allowed by the best farmers to remain. The average yield of grass may be estimated at about two tons to the acre, some perhaps as high as three tons during the whole season. The grass is prevented from running out by the use of plaster, or ashes, and an occasional top-dressing of barn-yard manure, or peat and swamp composts. When the turf becomes somewhat hard and "bound out" as the term is, a fine harrow is passed over it early in the spring, a small quantity of grass-seed is sowed upon the surface, the top-dressing applied, and then rolled smooth with a wooden roller. The land also is occasionally varied from mowing to pasture, and so *vice versa*, or is first mowed and then partially pastured. By such management the farmers of Putnam, and indeed of most of the other counties in this vicinity, where the land is rocky and broken, keep it constantly in grass and good heart, reserving the smoother and more easily worked sections for their root and grain-crops. They raise very few cattle here, usually marketing their calves, and depending upon purchasing steers from 3 to 5 years old of the western drovers, principally in the months of March and April. These they keep till grass-fat, which is from August to November, and then dispose of them to the butchers of this city. Being so near the market they are daily advised of prices, and can thus always sell to most advantage. Some of the farmers assured us that their land would support a beast to each acre; but as we saw much which would require at least three acres for an animal, we suppose it would be safer to allow two acres for each steer during the eight months of feeding. The gain during this time is estimated at from $10 to $20 per head, according to circumstances; allowing it to be $13 to $14 on the average, and the land worth from $30 to $60 per acre, it requiring so little labor to manage the stock, the farmer gets a handsome return on his investment; and with this system of grazing and consuming all he raises upon the land, he is constantly enriching and improving it.

When Mr. Clift came on to his farm 30 years ago, the buildings were few and mean; scarce a good fence upon it; the upland covered with stone, and the lowland with swamps and bushes. His improvements have been gradual, but thorough and permanent, and the farm is now under a high state of cultivation and presents a very fine appearance.

As many places as we are in the habit of visiting, it would be tedious to our readers to describe over again in each farm such things as are in common; we shall therefore confine ourselves to those improvements we have not noticed elsewhere.

Ditches.—In ditching swamps Mr. Clift has contrived to have these run generally where he wanted his fence. They are usually dug two feet deep and four feet wide, and filled up with round stones to the surface, and the wall then carried up four to five feet high. Thus he absorbs all the stone upon the land, and the water finds its way through the bottom of the wall to the open courses. The drain is of a gentle slope, the bottom consequently never gullies; neither can it fill up between the stone by the wash of the soil, and being sunk below the frost it is always open even in the severest weather.

Walls.—These are very thick, and instead of being laid up all the way double, every other course is a large stone placed across the whole width, and when finished they are capped by a flat stone as wide as the wall. Made in this manner they settle evenly and last a long time. In building these, whenever it was possible, he has laid them up along the banks of rivulets, and finds that they stand better so than when no stream runs with their line.

Irrigation.—This Mr. Clift intends to pursue to some extent, by making dams across the rivulets and open places at convenient distances, and sink a flume in each dam with a gateway in it. He can thus turn the water back upon the swamps which he has formed into dry meadows any time that irrigation may be of service to them. We have very little idea as yet in the United States of the value af water-meadows, and how easily they may be formed, and the products upon them doubled or even quadrupled. Under head of Tour in England, No. 8, Vol. I., page 231, we discussed this subject at length; it is therefore unnecessary for us to dwell further upon it at present.

Hay.—It is well known that grass which grows upon stony land is much sweeter and more nutritious than that produced upon a rich, smooth soil. That of Putnam county is therefore particularly valuable, and, ton for ton, will make at least 25 per cent. more beef or mutton than such as is grown upon plains. Mr. Clift says his best hay is made from the grasses which come in naturally, such as white clover and blue grass. He cocks it early in the afternoon of the day it is cut, lets it stand till the next day to go through the sweating process, and then puts it in his barn, sprinkling four quarts of salt to each ton, as it is stowed away. If unusually green, he mixes a little drier hay with it, or puts a dry load on the top of the mow or stack; in this way the excessive moisture will be absorbed. He prefers quite a tight covered barn to one more open to put his greenest hay in, closes the doors and windows, and finds that it thus keeps best. This is contrary to all previous practice known to us; we had supposed that a stack, or rather open barn was best for housing green hay. Mr. Clift's are as tight covered as a house. This hay comes out very green and sweet in the winter, and is so nutritious that it will fat sheep as well as grass, and without any other food whatever. But it must be recollected that the sheep are of a *fine breed*, and not the coarse long-legged riff-raff of the country.

Buildings.—The house is in plain cottage style, extremely neat, and just the thing for a farmer. We think large mansions quite out of place on a farm, and that too much money is often invested in these to the great regret afterward of the persons erecting them. A farmer's pride should not be displayed in a costly house, but rather in improvements upon his land, and in his stock, and growing large crops. The grounds about the house are prettily planted with trees; the garden is ample and well stocked with fruit and vegetables. The outbuildings, such as the dairy and ice-house, are all convenient and well made. The corn-crib stands 2½ feet from the ground, upon stone posts, with wide stone caps upon them, rendering it quite impossible for mice or rats to get in. The barns are admirably constructed. They are built upon the side of a hill; the upper story is of wood, and is used for storing the hay and grain; the lower story is devoted to stabling, and a cellar for roots. The stables open into yards exposed to the south. We are great advocates of underground stables; they are cooler in summer and warmer in winter than those above ground, and where the soil is a dry one they never suffer from dampness. Water is introduced into these by pipes from springs above, and also into the yards, a very great convenience and comfort which is too often neglected by our farmers. The cellar-walls are furrowed out by scantling six inches thick and lathed. This keeps the roots from touching them and imbibing moisture, which spreads and rots, or causes them to grow. The mangers face the windows, with an alley between for foddering, Mr. Clift preferring that the animals' heads should be to the light: each one has a stable to itself, and remains there unfastened—a wheelbarrow is used to carry out their manure. The under stories of the sheep-barns are fitted up with racks and troughs, and have a moveable front which is closed in storms or very severe weather. Water is also constantly supplied in their yards, for Mr. C. finds from long experience, that this is as necessary for sheep as for any other kind of stock. Turning the poor animals on to snow for their drink is a cruel method, and often the cause of disease and death. The sheep-barns and smaller buildings are thatched with rye-straw. It makes a cooler roof for summer, and warmer in winter, is impervious to rain, is cheaper than shingles, and will last 20 years. Such roofs are quite common all about New York, they are also used for stack-coverings.

Orchard.—Formerly 400 to 600 barrels of cider were annually made on this farm; now, only a very few, just enough for vinegar, the residue of the apples being fed to the stock.

Stock.—Mr. Clift has been celebrated for some time for his superior flock of long-woolled sheep, embracing the best crosses of the Leicester and Cotswold. He gave an excellent account of these (page 183 of our June number), which supercedes the necessity of our dwelling upon them at much length. We inspected these animals closely, in their naked forms just after shearing, and we must confess that we think them among the choicest flocks af the country. They are very *evenly* and finely bred, maintaining a striking family likeness throughout. One meets with no great incongruities here, such as coarse heads, ears, and legs, and big paunch bellies. The heads are not only fine, but *dished*, a point we think much of. The briskets are wide, deep, and projecting; the backs broad and rounding; and the quarters well let down and full. Since the introduction of the manufacture of *mousseline de laine* among us, long wool is quite in demand. It is full 40 per cent. higher than last year, and now pays the sheep-master well. Growing wool is henceforth destined to be a profitable business. We were surprised to see how easily these sheep are kept. They get fat on quite short pasture, among the rocks and hills; indeed, three are well supported on the same space of ground, where two of the coarse, long-legged sheep of the country will scarce obtain a living. Crosses of them on the common sheep make large thrifty animals, maturing early, and are in good demand for mutton in this market. Mr. Clift breeds for sale, and considering the superiority of his flock, and the expense he has been at in rearing it, his prices are moderate, and within the compass of any farmer desiring such stock.

The swine are a cross of the Berkshire on a good-sized white hog, imported some time since from England, and resembling the Grazier. The white color now predominates among this stock. The pigs are generally well formed and thrifty, mature reasonably early, and grow to a good size. They pervade in all the river counties.

The cows are nearly all a cross of the Durham or the Devon, and are selected for their dairy qualities. We found two good native milkers here, indicating no trace of a recent foreign cross. Mr. Clift showed us two pairs of formidable stags, a high cross of the Durham. They are extraordinary animals in the yoke, and we should like to see those who are prejudiced against this cross for working-oxen, outmatch them with any other breed.

We called upon Judge Watts, Mr. Fuller, and several other farmers of Putnam and Westchester counties, nearly all of whom follow the system of grazing cattle. It was a great satisfaction to see their fine herds ancle-deep in rich grass pastures, which one might judge they were turning into meat and tallow at a profitable rate. We were so much pleased with our short excursion in these fine counties, that it is our intention to repeat it as soon as possible at more length. Whatever may be said to the contrary, the improvements here for the past 20 years have been great, and they are still progressing; more especially such as ditching and draining, husbanding and applying manures, and keeping the land in grass, or giving it a fair rotation of crops; fences, farm buildings, &c. We regret to say that Putnam has not yet formed an Agricultural Society. It is to be hoped that the good effects of the forthcoming show of that of the State Society at Poughkeepsie, will convince the people here of the importance and utility of these institutions.

THE EGG-HATCHER.

Several months ago we informed our readers, that a machine called the Eccaleobion or Egg-Hatcher, was in operation in this city for the purpose of producing chickens by artificial means; we wished, however, to see it thoroughly tested before drawing public attention to it, so as to avoid the too common imputation of hastily commending what might after all prove more curious than useful. The feasibility of hatching eggs by this machine is no longer doubtful, and the operation is not only safely performed, but we are convinced that chickens can be produced and reared by *artificial* means, with more *certainty* and *cheaper* than in the *natural* way; and that a wooden box not over 4 feet square, with a single person to attend it, and the expenditure of a shilling's worth of charcoal per week, will hatch out more eggs in a year than an army of ONE THOUSAND old hens! If any of our readers are credulous now upon this subject, let them call at 285 Broadway, and Mr. Mickles, the gentlemanly and intelligent manager of the operation, will soon convince them that the half has not been told. We shall now proceed to a description which we make up almost entirely from the pamphlet of Mr. Mickles, and conversations that we had with him on the subject.

Description of the Ec-cal'-e-o-bi'-on.—The name or title of this machine, is derived from two Greek words, Εκκαλζω, "I bring forth," and Βιος, "life,"—forming the compound eccaleobion, signifying "I bring forth life."

The eccaleobion or life-producing machine, forms, to outward appearance, an oblong box, 4 feet 6 inches long, 3 feet 8 inches high, and 3 feet 6 inches wide. It stands out from and is disconnected with the walls of the room, and its efficient action and regulative powers are enclosed within the case. It contains nearly one thousand eggs, and is divided into eight compartments, or divisions, open to the sight, (the doors being glazed,) in which the eggs are deposited, spread promiscuously upon the floor of each division. The eggs lie uncovered, neither wrapped in flannel nor immersed in sand, as has usually been done, in order that they might retain their warmth when exposed to cold, or resist the effects of too great heat.

For the first few hours after their liberation from the shell, they are left in the drawer where hatched till they become dry and gain strength enough to stand well, after which they are removed to another drawer where the temperature is a little lower. Here they are kept for a day or so, by which time being strong enough to run about, they are removed into the little box-yard surrounding the machine. Under this they find shelter any time they please, as warm and grateful as the covering of the wings of a hen. They now require to be carefully fed and tended for two or three days, after which, revelling in the luxury of their new existence, they may be seen running about the floor of their apartment, and proper means being used, neither require nor feel the loss of that care which, in all other cases, a maternal parent only can bestow.

Birds in a healthy condition require no aid to effect their escape from the shell; accomplishing their freedom themselves in a remarkaly uniform manner, making a circular fracture with their bill, and bursting the integuments of the shell by strong muscular exertion.

Few eggs, except those of rare or foreign birds, are worth the trial of hatching, if more than a month old: their condition, however, is greatly influenced by the weather—very hot weather destroying vitality in a few days.

This machine does not, as is frequently the case with eggs set upon by the parent bird, ever addle them. This evil is occasioned by the alternation of heat and cold, arising from the hen's unsteady sitting. The warmth imparted by the machine is uniform and continued.

Failures, however, arise from the following causes, viz: want of impregnation in the egg; age, commonly called staleness, whereby life has become extinct; weakness of the vital energy of the egg, produced by old age, lowness of keep, or ill health of the parent; in these cases, the embryo partially developes itself, but dies before the full period of incubation.

Eggs may be hatched by other means, but if the process be not properly executed, the young birds are weakly and soon die. The operation, however, by this machine is so certain, and so completely under control, that the birds produced by it come forth in the most healthy state, and live, flourish, and fatten, as well as any other of their species who owe their existence to a more natural and less extraordinary birth.

There is no difficulty in teaching the young of the various tribes of gallinaceous fowl to eat and drink; they perform these operations spontaneously, or from observation, as appetite prompts them, nor is food necessary till 12 or 20 hours after they are hatched. Sickly and badly-hatched birds generally die from inanition.

It is not necessary, in the eccaleobion, to move or turn the eggs for the purpose of subjecting each to its fair proportion of warmth, as the machine acts uniformly, not only with the same power upon the whole surface of each egg, but upon all alike, however great their number. But, to prevent the yolk of weak eggs from settling by its specific gravity, and adhering to the shell, it is useful to pass the hand over them, so as to change their position once in twenty-four hours.

The egg of a strong, healthy bird, at the time of its protrusion from the body, is completely filled with yolk and albumen. If examined a few days after, by holding it toward the light, a small bladder of air will be discoverable at the larger end, which increases with the age of the egg. This waste of its internal substance is occasioned by absorption by the atmosphere, through the pores of the shell, of the more volatile part of its contents. When the bladder is large in any egg, it is unfit for incubation; nevertheless, in a good egg, as incubation proceeds, this bladder becomes considerable, probably produced both from evaporation by heat, and the vital action going on within the shell. It also serves an essential and important purpose in the economy of this mysterious process.

The germ, or embryo of the chick, contrary to the received opinion, is not in every egg placed precisely in the same situation, but varies considerably. Generally it developes itself within the circumference of the broadest part of the egg; sometimes it is found higher, sometimes lower; and, when held before a strong light, has the appearance, when a few days old, somewhat resembling the meshes of a spider's web, with the spider in the centre. As it increases in size, the bulk of the contents of the egg decreases, as already stated, so that when the bird is completely matured, it has ample space to move, and to use its limbs with sufficient effect to insure its liberation.

The eccaleobion machine is peculiarly calculated for practical purposes, and whether one desires to hatch very large quantities of chickens for market, or only a few, this mode of producing them will be found by far the most economical and the most convenient. The American eccaleobion is entirely different from anything ever produced in Europe, and infinitely superior for all practical purposes. It possesses a complete and perfect control over temperature, which is the greatest desideratum, and is very compact, containing the hatching-ovens, the heating apparatus, the brooding-places, &c., all within the space of about three and a half feet square. It is portable and in all respects convenient, and is so systematic in its operation, that if the eggs deposited in it are equally good, they are all equally certain of producing the young; and, when liberated from the shell, they are exempt from nearly all those diseases which are so fatal to young fowls in the farm-yard.

The first cost of a machine capable of holding 800 or 1000 eggs, is $120, but they are not liable to wear out, and the amount of fuel is so small, being only two barrels of charcoal per month or thereabouts, that it must be admitted to be the most economical method which can be contrived. The machines can be attended by females, or those who, from debility, are incapable of ordinary labor. Should poultry decline in price to about the average of animal food in general, still its production by means of the eccaleobion can not fail to be extremely profitable.

It is worthy of remark, that fowls produced by these machines, being free from the ordinary diseases of a farm-yard, arrive at maturity much earlier than those produced in the ordinary way, and are usually fit for the market in six or eight weeks. Thus enabling a person to obtain a quick return for his investment of capital. Persons living near a populous town, with a very little land, may produce with these machines a large amount of poultry, and insure a much increased revenue. The price of the second size, having about one half the capacity of the one above-described, will be $75, but will require more constant attention.

The eccaleobion has the power completely to control temperature, independent of climate, season, or changes in the atmosphere, and is absolutely uninfluenced by them. By means of this perfect command over temperature, the egg of any bird, not stale, placed within its influence at the proper degree of warmth, is, at the expiration of its natural time, elicited into life without the possibility of failure, which is often the case with eggs subjected to the caprice of their natural parent. To a successful rearing of a large number of birds artificially, the required essentials are, a sufficient number of these machines, suitable buildings, dry soil, warmth, proper food, and careful attention to cleanliness and their usual wants.

By a judicious system of management, suitable buildings being provided, one thousand birds might be kept in the best possible condition, with less trouble and attendance than a brood of a dozen chickens would require without such measures being taken to rear them.

One great object to be gained by this artificial process is that the poultry will be better and more fresh than usually brought to market, and the markets can be the most liberally supplied at those seasons when the article is the most scarce and the most inferior in quality. There will always be more or less difficulty, however, in producing large numbers during the three winter months, on account of the scarcity of good and fresh eggs.

In our next we shall give an account of the change of the egg within the shell from the first day that it is placed in the eccaleobion till hatched. It is a curious chapter and well deserving attention. We shall also add general remarks on the diseases and management of poultry.

IMPROVED WHITE FLINT WHEAT.

In answer to several recent inquiries, we say that we think the above variety of wheat, so greatly improved and successfully cultivated by General Harmon of this state, is the best we have; and it has given universal satisfaction wherever introduced. It is beardless; has a clean, bright straw; large, well-filled heads, with a beautiful white-skinned berry, which produces a quality of flour superior to any other grown in this country. Pretty much every variety in Europe and America has been tried here, and the improved White Flint continues to take precedence over them. It can be had at General Harmon's farm from $1.12 to $1.25 per bushel—delivered here at $2 per bushel, or $6 per barrel, containing 3½ bushels.

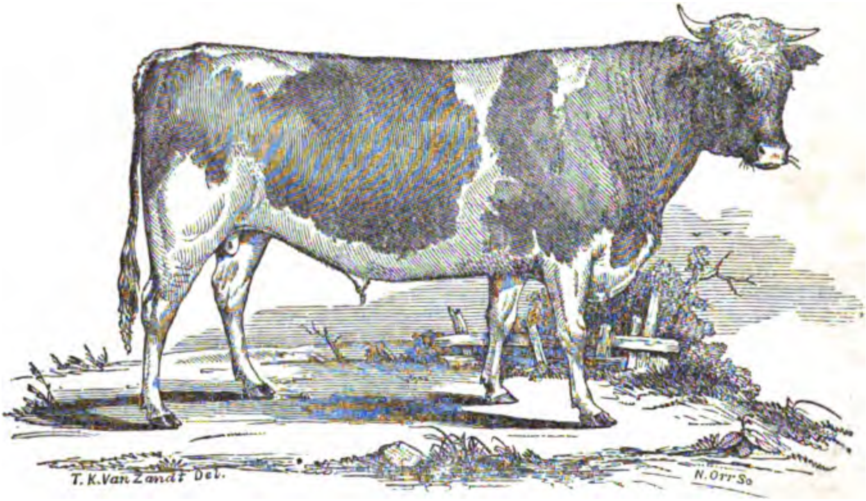
We are surprised when we look about us to see how little attention is paid to a choice of seeds. It is a matter of great consequence to the grain grower. It is in vain that he makes a judicious preparation of his soil, if he is not provided with a good variety of seed to occupy it. A choice in seed frequently makes a difference of from five to ten dollars an acre in the value of the crop; how important, therefore, that this matter be properly attended to.

Grain which is to be reserved for seed should be allowed to stand several days longer than that to be cut for consumption, otherwise it does not germinate so well, nor produce so thrifty a growing plant. When designed for this purpose, the berry should be glazed hard previous to cutting. In selections it is important to choose from the largest and best filled heads, growing on such a length of straw as is most desirable for the farmer's particular purpose. They pay particular attention to this matter in Great Britain, and if their climate were equal to ours for growing wheat, their flour would soon bear the palm in their markets. We ought not, however, to trust too much to superior climate; for by continued efforts, they may at length make such improvements as will place us in the background.

A HALF DURHAM AND AYRSHIRE BULL.

The above, Mr. Bement informs us, is not a *fancy*, but a *faithful* portrait of a half Durham and Ayrshire bull in his yard. We can readily believe him, for it shows the points of an animal of living flesh and blood. This is a cross highly esteemed both by breeders in this country and Great Britain, and some extraordinary animals have been produced by it. The Ayrshires, pure bred by themselves, are much liked in New England by Messrs. Cushing, Randall, and others; we also perceive that they are well spoken of in Virginia by Mr. Botts of the Southern Planter. Being a hardy, medium-sized animal, they do well on short pastures, and are esteemed excellent milkers.

Sheltie.—(Fig. 47.)


T. K. Van Zandt Del.
N. Orr Sc.

The Property of C. N. Bement, Esq., Albany, New York.

SKETCHES OF THE WEST.—NO. V.

Plantation of Mr. Benjamin Warfield.—This we also found a very fine one, and under a good state of cultivation, and devoted principally to stock. There is the usual quantity of woodland pasture set off here, the residue of the land is devoted to a simple rotation of crops, being mostly corn and rye. The sod is broken up during the winter, or as early in the spring as possible, and planted with corn. Sometimes the ground is so rich that it will bear two or three crops in succession; but we believe Mr. Warfield generally allowed only one crop to be taken. Thus, as soon as the corn is glazed, he cuts up close to the ground, shocks it, and then sows the field with rye. In October they commence husking and so continue on during the winter as they have time. As the grass fails, the husked corn-stocks are carted on to the field which it is designed shall be plowed the next year, spread evenly over it in patches, and a large herd of cattle fed upon them. By this method the field shortly becomes abundantly manured, and is then broken up for the following year's corn crop. It is thus the Kentucky planters are saved the dirty and laborious process of digging up and carting out large quantities of manure from the barnyard, a system of northern farming not at all to their fancy, and to which they usually express a decided disgust. We have often laughed at the wry faces they made up on speaking of it, and replied that it was less laborious and unpleasant than they supposed; there was nothing like habit in these matters, and we Yankees took the drudgery as a matter of course. They are indebted in Kentucky to their superior mild climate for being able to manage these things more easily than we do. Their system of open feeding is a good one for them, and meets our hearty approval, except during heavy rain-storms, and the severest cold weather, when shelter there is quite as necessary as here. The rye gets so strong and rank a growth in the fall, that it can be pastured beneficially more or less all winter when the ground is frozen sufficiently hard to prevent poaching; and then again, when the land has become dry in the spring, till the middle of April. After this the stock is taken off till it becomes ripe, when hogs are turned on to harvest it; the stubble is then plowed up for corn again, or suffered to remain in pasture if it has been previously sowed with grass-seed.

Stock.—This, of course, is Durham, and the foundation of Mr. Warfield's herd was the '17 importation, crossed on by the best later ones. They are choice and fine, and all have quite a family resemblance in the horn, which is very slender and somewhat longer than usual in this breed. His superior young cow Caroline has already taken seven premiums; she is extremely even and well shaped, and of good milking qualities, as indeed is his whole stock, this being a sina qua non with Mr. W. in breeding. We found Cossack here, an imported bull, half brother to Mr. Jacques' (of England) celebrated Clemente, which won the first prize as a two-year old at the Royal Agricultural Society's meeting at Cambridge in 1840. We saw him in August, 1841, at the Yorkshire show at Hull, when he was second only to Mr. Bates' Cleveland Lad. Cossack is a fine snug bull, and remarkably well ribbed up. Shannon, bred by Mr. Sullivant, of Columbus, Ohio, is a noble, airy, upheaded, active fellow. Mr. W. has many fine animals, and means to keep on breeding till his farm is completely stocked with first-rate thorough-bred Short-Horns. We also found here a fine stock of thorough-bred Berkshires and their crosses.

Returning to Lexington by way of Dr. Warfield's, we took a look over his horses; and, really a beautiful lot he has, and quite numerous. Those which pleased us most among them was a pretty troop of fifteen or twenty colts running wild in a large pasture, just like any other cattle. They were the produce of some of the most celebrated horses of the day; and with their fine forms, clean blood-like limbs, high spirit, and gay action, running, capering, and playing, like a herd of wild deer in their wide paddocks, presented as animating a sight as one will easily meet with in an enclosed country.

Plantation of Mr. James E. Letton.—We had many other invitations, and a great deal to see in the neighborhood of Lexington, but some necessary business to attend to in Ohio, obliged us to depart; but arriving at Millersburg, we found that we could not pass without calling to see Locomotive, lately imported by Mr. Letton, from Mr. Bates' celebrated herd at Kirkleavington, England. To do this we had six miles to thread out all alone, in a pretty blind way across the country. But a gentleman at the hotel where we stopped, drew a plain map of the route, and the landlord furnishing us with a smart bay filley, that from her spirit and action we set down at once for near thorough-bred, away we galloped. We pretty soon got into a large open park, then bearing to the left, and now taking to the right, and fording a wild crooked rivulet half a dozen times, opening and shutting as many different gates as we passed from enclosure to enclosure, we at last arrived opposite a snug farm-house. Here we thought it was best to make an enquiry, when a very obliging young man came out and insisted on accompanying us to show the way to Mr. Letton's, although some two miles or more distant. We had not proceeded far, however, before we espied a person on a tall white pacer, making for the same gate as ourselves in an oblique direction. Coming up, this turned out to be Mr. L. himself, so after making a self-introduction, he hospitably invited us home.

The cultivation of this plantation is much like others before described; we shall therefore pass it over. In feeding his stock, Mr. Letton goes against the forcing system entirely, and means to treat his high-breds in the same way that any good planter and Christian man would his common farm animals. We accordingly found Locomotive running out in the field with the other stock, from which he was taken up at night and fed a little cut hay, mixed with coarse bran.

In the month of January stock appears to disadvantage, and on first looking at Locomotive, one might say that his brisket is even too low, and his fore legs, perhaps, a little too close together. On the other hand, his head and horns are fair, with an elegant arched neck; his back, loin, and quarter particularly good; straight, fine hind leg; twist well let down; and tail beautifully set on. To look at him behind, his barrel is superb; and his handling, from beginning to end, fine, elastic, and without fault. Mr. Bates spoke very highly to us of the milking qualities and fattening propensities of his progenitors, and all we can further add, is, there he stands, and, though not perfect in himself, (for what animal is?) he can not but be of eminent service to the stock of Kentucky, high-bred and superior, as all acknowledge it now is. When we looked over Mr. Letton's stock, his cows were all imported. We liked Miss Severs best. She is superior in the brisket, and otherwise very good.

Mr. L. also brought over from England a couple of young stallions of the cart-horse breed. The black is a very handsome animal of his kind; indeed, one of the most so that we ever saw. The gray is larger, but somewhat coarser. The object in view is to cross them on the largest mares of the country, and the females of this produce breed to large-sized Jacks, for the purpose of insuring them stout 16-hand mules, for the heavy work of the farm, and to sell south. Mules are so much tougher and hardier than horses in a hot climate, that it has become a great object to breed them of sufficient size to do the heavy work of the plantation. Under these circumstances, Mr. L.'s enterprise is highly commendable, and we wish him marked success in his laudable improvements.

Next to the horses, we were shown some fine large Leicester sheep, and some swine, a cross of the Berkshire on the Irish Grazier, which, had they a smaller ear, and one could be assured of the same hardiness, we should consider them almost equal to the pure Berkshire. We think this cross, anyhow, infinitely superior to all the Woburns we saw in Kentucky, or crosses of them.

On the road to Maysville, mounting the box alongside of the driver of the coach, whom we found quite an intelligent young man, as the horses started off, we were attracted by the superior power, form, and action of the leaders, and inquired where they were bred?

"At the north."

"Do you not find them superior to those in Kentucky?"

"Yes."

"In what respects?"

"They stand not only the cold, but the hot weather better than the native-bred horses here; have harder hoofs, and are more enduring; possess more power; better wind and bottom; and somehow or other seem to do their work quicker, easier, and more comfortable to themselves and driver."

"Have you had much experience in driving northern horses alongside of the western ones here?"

"Three years."

"To what do you attribute the northerner's superiority?"

"Mostly in breed, but something in climate and food. The farmers here feed too much corn and rich rank pasture."

"I should judge from their action your leaders would easily trot their mile in 4 minutes."

"Yes, that they would, in less time with a light load; for when I have had in my whole team of northerners, I trotted a mile with this great heavy stage in 4 minutes 22 seconds; which is at the rate of 14 miles an hour, and I can any time do it again."

Gentlemen may take this conversation for what it is worth; but now that Macadam roads are pervading Kentucky, if they would breed the proper sort of horses, adopt lighter vehicles, carrying only 6 passengers inside and 3 outside, they might travel 8 miles an hour, with as much ease as they now do 5 miles. Railroads are out of the question there for a long time to come; they can never pay, and it is to be hoped under these circumstances that greater attention will be paid to expediting their stage-coaches. We have always thought coaching much more useful, and certainly quite as exciting, as the course. Young men in the interior want something to stir up their blood and give life and spirit to a country life. Suppose then they get up a few driving-clubs, for four-in-hand handsome match horses, put the driver in costume, mount one of their servants in the republican livery for a guard, and give him a French horn to occasionally enliven the road. The stage-coach of Kentucky would thus soon become in great vogue, and add much to the pleasure of a journey through this beautiful fertile country.

SOWING RYE AND GRASS SEED AMONG CORN.

From the 20th of the present month till the 10th of September, according to the latitude, is the proper time for sowing rye and grass-seed among corn, though we have known it sowed with good effect still earlier than the first period mentioned. So long as the corn is standing, in order to have the rye take well, it must be hoed in, as the stalks will have grown too rank by this time to work a narrow harrow or cultivator among the rows. If the sowing is delayed till the corn is cut up and shocked, as is common at the west, harrows can then be used without difficulty, and nearly all the ground will be covered except the spots where the shocks stand, and these can be sowed after the shocks are removed; if in the fall, with rye or wheat, as the case may be; if not removed till winter, with barley or oats the following spring. In that case, instead of mere patches where the shocks alone stand, it would be better to leave rows of the width of such shocks the whole length of the field. When rye is sown among the corn, and got in so imperfectly, a peck to a half bushel more seed should be used per acre than is generally allowed in a bare open field.

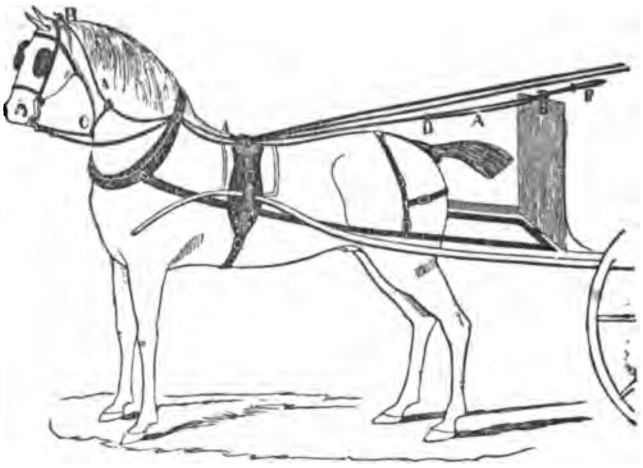
AGRICULTURAL EDUCATION.

By reference to Dr. Gardner's advertisement in this No., it will be seen that he proposes commencing a course of scientific agricultural instruction, at the University in this city. We are heartily glad that he has embarked in this laudable undertaking, and need only add, that we think him well qualified for the task he has undertaken, and hope gentlemen will avail themselves of his course of lectures. It is high time that something was done by way of better qualifying farmers for their profession, and we are rejoiced that Dr. Gardner has at length consented to make a movement toward the accomplishment of it. It will be seen that the price of board is so cheap in the vicinity of the University, that any one from the country need not be deterred from attending the instruction here on account of the expense.

The Forthcoming Show of the New York State Agricultural Society.—This great event, let it be borne in mind by our readers, will commence on the 18th of September, at Poughkeepsie, and continue three days. Wherever we go we find that the show is spoken of with much interest, and we notice that many of our farmers and mechanics in this vicinity are preparing for it. The right sort of spirit also pervades the river counties in the more immediate neighborhood of Poughkeepsie, and considerable preparation is on foot there for a grand display. The Executive Committee had a meeting at Poughkeepsie the past month for the purpose of making preliminary arrangements, and found themselves warmly seconded in all their wishes by the inhabitants of the place. Old Dutchess, we think, will not be lacking upon the occasion, but do herself honor during the three days of the show. Many gentlemen from the north and the south will be there, as curious gazers, and purchasers of stock, implements, and seeds. Let those, therefore, who have such things to dispose of, be on the alert, and take care that they are well represented. We hope western New York will send forth her handiwork, and some of her fine animals. The distance, certainly, is not too great for this part of the country to make a handsome representation of its products.

Fac Simile of Washington's Letters on Agriculture.—We desire to call particular attention to the notice of this work under head of Editor's Table, page 222 of this number.

THE PATENT SAFETY REIN.



Patent Safety Rein.—(Fig. 48.)

For the above cut and the following directions for the use of the Safety Rein, we are indebted to the New York Spirit of the Times. The article was addressed to John S. Skinner, Esq., of Washington, by Mr. Thomas Blagden. We gave a full account of this rein, page 350, of our last volume, or would copy Mr. Blagden's letter entire. It was invented by a Mr. Miller of Scotland.

Directions for use of Safety Rein.—In putting on the rein for a gig, keep the buckle to the left hand, or near side; that will place the loop, which is on the middle of the rein, below the hook or head of the bridle, which prevents it from being thrown out by the motion of the horse's head. For a pair of horses, keep the two short chapes outmost, and the loops on the middle downward. For saddle, keep the buckle to the left hand.

When the rein is used either for running, rearing, kicking, or going backward, it should be applied suddenly with a strong arm, keeping up the pressure until the horse is still; it should then be relieved suddenly, at the same time motioning the horse to go on. If he is only a runaway he will obey it at once, such horses being generally of a willing good temper. But should he possess the other vices, or any of them, it frequently proceeds from a stubborn, sulky temperament; with such horses the above process may require to be repeated, until he is subdued, and obey the motion, which will be effected, even in the worse cases, after a few times.

To derive the full benefit of this rein, it is recommended after the horse has been a few times firmly gripped with it, to use it occasionally, and it should frequently be used instead of the bit-rein to stop him on ordinary occasions; this will remind the horse of his subjection, and will accustom the rider or driver to the ready and accurate use of it in case of an emergency.

By attending to the foregoing directions, the most troublesome horse will, to a certainty, become quiet and manageable.

NEW YORK FARMERS' CLUB.

Potatoes, Lettuce, etc.—Junius H. Smith, Esq., made an interesting written communication to the club on the subject of seed-potatoes, setting forth his success in producing an early and a productive crop of potatoes from very small seed, and also the economy of using such potatoes instead of giving them to the pigs. He also presented a cos lettuce weighing three pounds and one ounce a plant, and potatoes grown from small chits, as large as those usually produced from full-grown potatoes.

Mr. Sprunt, gardener of Stephen A. Halsey, Esq., of Astoria, presented some very fine sovereign potatoes, distinguished for their fine color, and large, fine skins; also, an ox-heart cabbage weighing ten pounds.

Late Strawberries.—Samuel Stevens, Esq., presented some large strawberries on the stem, some ripe and others ripening. These are in season, while others in his garden have done bearing for this season; also a ripe nutmeg-lemon of fair size, grown since being transplanted from the hot-bed in the open air.

Galvanic experiment on Potatoes.—Mr. Ross of Ravenswood, presented some potatoes measuring seven inches in circumference. He planted the seed-potatoes on the 5th of May last, using leaves only for manure. To three rows of two hundred feet in length, he applied perpendicularly, at one end a plate of copper, and at the other one of zinc, both about five feet long, and connected the two plates by a copper wire supported on an adjoining fence, so that with the moist earth of the three rows, the electric circuit was complete. All the potatoes of the field were planted at the same time, but those having no galvanic apparatus, have small potatoes not larger than peas. He removed the blossoms from the potatoes, and the stems and leaves are all much alike; so that this enormous difference in the tubers *is due* to galvanism.

He had cucumbers, last year, five inches long, in five weeks, from the seed, by using the *galvanic circuit.*

Chairman—These experiments are not new. They have been tried in the conservatories of England, and with especial success on pine-apples and some other fruits.

Value of Urine.—It is calculated that if the urine of the 2,000,000 inhabitants of London was collected and applied as manure, its annual value would be £500,000, about $2,500,000! The farmers of Lucca, in Italy, give $5 per family at Pisa, for the contents of the cesspool, and transport them a considerable distance. At that rate, what is annually wasted in New York city, would be worth at least $350,000!

CULTURE OF TOBACCO.—NO. III.

HAVING attained a suitable soil, which can not be supposed to have the highest porosity by mechanical means, burning, or fallows, and the land being in a proper condition as respects drainage, the next object of the farmer is to secure the second indication—*to hasten the solubility of its saline matters.* In this part of my subject, I take for granted what I know to be the truth, that fair lands recently cleared, although unproductive, are yet well stored with the insoluble saline matters already pointed out. My remarks do not refer to such soils as are essentially deficient.

This indication may be accomplished in several ways:

1st. By liming.

2d. By burning part of the surface-soil with lime in the kiln.

3d. By incorporating vegetable matter in the soil.

4th. By burning, if clay, and pulverizing.

These processes are not all applicable to every soil. They are to be severally adopted as circumstances will permit, and that the distinctive value or expediency of each may be understood, I will treat of them in a few words.

Liming.—The action of this important agent on the soil is manifold; it gradually liberates alkaline matters from their combinations with silica, rendering them soluble, and this is the principal action now under consideration. But by destroying the chemical union of the minerals of the soil, it enables the carbonic acid to act upon other saline bodies present. It produces mechanical disintegration as well as chemical disunion, neutralizes acids, destroys insects, hastens the decomposition of vegetable matter, and yields food for the plant itself —and in the case of tobacco this is no unimportant point. To dwell upon each of these heads would require more space than the limits of this paper. The one now prominently brought forward, is the property lime possesses of reducing insoluble minerals, such as granite, felspar, &c., to the soluble condition, and which is the principal reason of its great power in amending poor lands, especially of primary and transition origin.

The dose of lime must be liberal, at least 30 bushels and upward per acre. It should be turned in to the depth of two or three inches, and applied as fresh slaked as possible some time before the crop.

As respects this property of lime, shell-marl will not replace it on the farm, although it likewise possesses the same action in a very diminished degree. If burnt, however, it will answer, in much larger quantities. Another reason why I recommend lime, is, that it forms a very large proportion of the ashes of the tobacco-plant; indeed, this substance is capable of entirely replacing potash in the structure of the plant. In the analysis given in my former paper there are 51.38 parts of the salts of lime in 100 of the ashes of tobacco from the Havana; but in the researches of Berthier upon six specimens from Europe, the United States, and Cuba, the quantity of lime was very little in proportion to the potash salts. This truth may be surprising to those who have read only the first work of Liebig on agricultural chemistry, wherein he makes potash the indispensible to fertility. But in chemistry it is a well-established fact, that one mineral substance may replace another without detriment to the form of the resulting body. This is termed isomorphism. In plants, the inorganic substances are present for various purposes; among others, they are of importance in determining the form or figure of parts, as well as in neutralizing acid substances, produced during vegetation, which require to be changed, such as oxalic, malic and other acids; and in tobacco the lime is in part united with malic acid to this end. Lime is not under ordinary circumstances, or in every case a substitute for potash; but the hydrate of lime is isomorphous with potash and soda. In wheat and grasses, lime can not replace the alkali, for it does not form soluble compounds with silica, which are essential to gramineous plants. But in tobacco, there is no silicates of potash worthy of remark, and lime is therefore capable, and does act, as a partial substitute for potash. This fact is of great consequence to the farmer who designs improving his neglected fields, for tobacco, and it will be better received when I add that in this respect marl or crushed lime-stone will answer as well as burnt lime.

2d. The second means recommended, the burning of some portion of the surface soil with lime in the kiln, is applicable only where that soil is rich in mineral *silicates* (granite, felspar, mica, clays,) and not when the soil is sandy or calcareous. It accomplishes the solubility of the mineral in the kiln, so that it is equal to direct manuring. Care must be taken, however, that the lime is in such excess as not to produce hard slags.

3d. The third method of increasing the solution of the valuable saline matters of the soil, is, by the addition of organic matters. This is the method which practical men have fallen upon for ages, and is directly followed from the operations of nature herself. The fact that new lands, laden with the accumulated leaves of ages, are fertile; while those tracts that have been cropped until destitute of vegetable matter, are commonly unfruitful, must have been observed from the remotest antiquity; and without further inquiry, must have suggested the restitution of vegetable matter as an improvement of land. I have already explained in my first paper how organic matter acts. It is necessary to observe in this place, that unless decay is freely going on, the action of the vegetable matter is impeded, or arrested. If the soil is wet or retentive of water, that kind of decomposition which yields carbonic acid (*eremacausis*) does not take place, but a putrefactive process, which is unserviceable in effecting the object under consideration. The value of organic matter in rendering mineral matter soluble, depends upon the dryness of the soil, the free access of air, temperature, and the rapidity of decay. The fertile plains of Patna in India, which yield the nitre of commerce, are rich in vegetable matter, which acting on the minerals of the soil release immense quantities of alkalies and lime.

Vegetable matter may be added to the soil in various forms—stable manure, peat, muck, weeds, and other rubbish, or the introduction of fallow-crops. Of these the fallowing of clover is the most economical and serviceable. It should be turned in to the depth of four inches at least, when in head, but before the expansion of the florets. At this time the greatest amount of organic matter is present in the plant.

4th. *By burning clay, and pulverizing the soil.* The action of these processes has been partly explained. The pulverization of the soil increases its porosity and extent of surface, and more rain-water and atmospheric air are retained—these act so far as they contain carbonic acid in rendering silicates, phosphates, and the carbonates of lime and magnesia soluble. *The burning of clay with this view is of the first importance in agriculture.* Barren clay, according to the ideas of farmers, even pipe-clay, that tough unmanagable substance so perplexing to the husbandman of primitive and transition countries, becomes remarkably fertile by being burnt and reduced into coarse powder. If any planter has practised, or shall be induced to burn a few loads of clay, he will understand the reason of its acquired fertility by observing the phenomena that appear under certain circumstances. Let a parcel of burnt clay remain in the field exposed to the air and rain; moreover, let it remain on such a spot that a little water is held so as to keep the heap moist for a week or two—if now dry weather arives, as soon as the clay dries at the summit, an *efflorescence* of saline matter will be seen, which increases with the drought, until the whole heap is frosted over with minute white crystals. This pheaomenon is familiar to the farmers of England and Ireland. It may be seen upon the bricks of our town-houses in such places as are continually moist, and is due to the difference made on clay by burning; for raw clay, exposed for ever, will exhibit no such efflorescence. As the burning of clay in America is not yet practised; as it is accomplished with great ease, requires no previous instruction, and can be trusted to slaves in the very outset; as the wood of our forests is wasted in large quantities, and might be used for this purpose; as every charcoal kiln may be made to yield numerous loads of this valuable article; as the materials are at home, and as it is one of the most valuable means of redeeming old lands and maintaining the fertility of new tracts, I wish particularly to urge it upon the attention of planters and farmers. With this view I shall make further observations on the subject to explain the nature of the phenomenon before mentioned. As long as common clay is in the natural state, it represents a mineral, having a chemical composition of so stable a character, that it will remain for hundreds of centuries unchanged, from any cause within itself; but by the addition of heat, the proportionate combinations of silica, alumina, potash, &c., which it contains, are altered, and instead of one mineral containing many constituents grouped together, it is reduced to a series of distinct silicates, which are acted upon by reagents differently from the complex mineral. As far as the alumina is concerned, it is rendered more fixed, more insoluble and persistent; but the potash, losing a portion of its silicic acid, allows itself to be acted upon freely by the carbonic acid of water. In the same way, if soda, or other substances be incorporated in the mineral, they are loosened from their affinities to a greater or less extent. Hence, if the saline efflorescence be chemically examined, it will be found to contain potash, soda, and other substances, the two alkalies as carbonates for the most part.

On this topic, I beg to state, that I possess practical knowledge, and therefore urge it forcibly, because I know that it will ameliorate many tracts at present doomed to hopeless barrenness. If they are clay, I can promise, with the land-owners of Roothings, who have practised burning for upward of 30 years, that it will increase the value of even good meadows 25 per cent., and barren clays at least a thousand per cent. It is an improvement calculated for the tobacco counties of Virginia, known to me, by a residence of six years in that state. It is an improvement adapted to poor worn soils, and nearly approaches lime in this respect. The expense is trifling, and in old fields where pine brush is abundant, may be considered a gain. The amount burnt can not be too great, in rich meadows 130 to 150 square yards per acre is used, but larger quantities would be required for barren land. The clay should be dry, and as pulverulent as possible when piled upon the brush-wood, and be burnt until it falls into a coarse powder. If heaps are made every five or six yards, the ashes are easily spread. It is to be used as a top-dressing, after the land is loosened as much as possible. Success in this practice is not to be expected if it is made the only means of improvement at first, or if the process is carelessly managed.

D. P. Gardner,
Lecturer on Agricultural Chemistry.
New York, June, 1844.

TOO MUCH LAND.

During a recent excursion in this, and some of the New England states, I was struck with the comparative sterility of land which might by proper cultivation become "the garden of the world." Instead of seeing fields of wheat bearing 30 bushels to the acre, we find scarcely 12 to 15 is the yield; where two tons of hay should be cut, hardly one is the product; where thriving fruit-trees might be expected, bending beneath the weight of their delicious fruit, our eyes are pained by the sight of gnarled, stunted, and half-dead trees, scarcely able to sustain the life of the few curled-up leaves that come forth as if to reproach their owners by the sight of their consumptive appearance. If they had tongues to speak, how bitterly would they complain of their treatment. Is it because nature is so miserly that she does not reward man for the labor he bestows on her, or because man will not let her yield a bountiful supply in reward for his labor? What is the cause of this sterility, and the complaints of the farmers that they can not make a living, though they have hundreds of acres at their command? It is evident the fault is with themselves. They attempt the cultivation of *too much land!*

Our farmers have from 50 to 500 acres under what they *call* cultivation. Still they are in debt, and in many cases the more they possess the worse they are off. Their land is scattered far and near. Two acres here, and ten there, instead of being compact together. In this manner, more time is often lost in going from one lot to another, in building the fences of other people, and keeping out their cattle, than the whole income of the land amounts to. I have myself lost more time in this way in a single year, than it would take to keep ten acres in the finest condition.

What is the remedy? Sell half of your land and spend the proceeds of it on the remainder, and thus make what you have yield a liberal income. This may appear to those who have always "followed in the footsteps of their forefathers," of adding field to field to their farms, as the height of folly, but I am confident it will be their salvation. There is a good old adage, one that should be remembered by *farmers* as well as others, "Never attempt too much." Depend upon it, there is no course so suicidal as that of owning and attempting to cultivate 200 acres, when you can hardly do justice to 100. Suppose, for instance, a man has 50 acres of naturally good land, and he has but a certain amount of manure, time, &c., to use in its cultivation, which is not enough to keep it in heart, or pay that attention to rotation of crops, which it requires, is it not evident that the land, the owner, or whoever is connected with it, must suffer? would not all intelligent persons condemn such a course? yet how many such instances are to be seen all around us! I believe it would be for the interest of many farmers, even *to give* away a portion of their land, rather than have so much in their care. Self interest tells us, it is the true policy of such a man to sell what he can not properly use, for he would gain time to devote to the remainder, money to purchase all that it required, his crops would yield in double ratio, his land increase in value as it increased in fertility, and thus he would be in every way benefited.

I have seen acres of the best land, overrun with daisies, burdocks, thistles, mulleins, and other noxious plants, that root out the grass, and eat up the life of the soil, without affording nourishment to man or beast, which might by a little attention yield a rich harvest. But the farmer has no time to attend to it, and the land becomes worse than useless; for it is self-evident that land must either increase in fertility, or decrease in value—there is no middle way—it must afford a profit or be an expense.

Look again at the swamp and meadow lands, with which our country abounds that are now worthless, and causing sickness and death in their vicinity. All these might be reclaimed and made the most productive land, by a small outlay of time and capital; the owners have neither, because they have too much land already calling for their attention. The muck contained in these places, can be made to pay better interest than bank stock. Yea, if properly used, it may be the farmer's mine of wealth.

This leads me to inquire how are our lands rightly to be cultivated? I reply by using the experience and directions of those who have studied the chemical formation of soils, and the effect different manures have on different soils. Much time is lost, and land injured, by the farmer not knowing the relative value of his manure, and the theory of rotation of crops, which might be saved by the expenditure of a little time and money in procuring and reading agricultural papers and books. There is too much of the saving a cent, and losing a dollar economy in this age. When the time shall have arrived that men will be willing to study the theory and practice of farming in all its details, then shall we see agricultural pursuits elevated to a proper standing and yielding a profit that shall rejoice the hearts of all.

C. Casse.

Orange County, N. Y.

THE COW-PEA AND PEACH.

Our friend, Mr. Affleck, on page 181 of current volume of the Agriculturist, in making some remarks on the cow-pea, says, in speaking of culture, &c., "It has already been *discussed* in all its bearings, but has been *but little* tried." Also, for fodder it is "difficult to save." As I differ from him on both points, and as the difference involves others, judging from the *italics*, and as it might deter farmers not conversant with the article from cultivating it for hay, I beg to give my notions on the subject.

The cultivation of the pea, has been known to me practically for the last twenty-five years, and although no experiment similar to the one Mr. Affleck proposes has ever been tried within my knowledge, yet so many have been, that the result of such trials seem plain. I can not call to mind where, but I think in the Southern Agriculturist for 1832, or about that time, you will find a detail of experiments with the pea. You will also find in Vol. XIII. of the American Farmer, page 212, an experiment made by the Hon. William Lowndes, as detailed by W. G. Read of Baltimore. At all events I feel certain, that though "it has already been *discussed* in all its bearings," yet that it was discussed from the deduction of *tried* experiments.

As a food it assuredly stands high, and is difficult to save if attempted as in curing other hay. There are two plans that will obviate the difficulty, viz: after cutting put them up into rail-pens having a floor of rails in the bottom some 6 to 12 inches above the ground, on which place the vine to some 2 feet thickness, and sprinkle it with salt, then a floor of rails, on which put more vine and so on; the other is, to pack away in your shed or narrow house, pea-vines and oat or rye-straw, layer and layer about, using salt on the pea-vine. I have housed the pea-vine the day cut. The vine is not cut by cradling, nor would any one require to be told it were impossible, if he ever saw them grow; nor would I suppose any one ever recommended it, unless writing of one thing and thinking of another. But they can be cut with hoe, knife, scythe, or sickle, either of which I should greatly prefer to the two-horse harrow, or any such mode; for this reason, that the horses would waste a large quantity of the ripe pea, being generally saved when about half the peas have ripened. I have used the hoe and the scythe, and think two hands can save about as much as by any other plan, though they may not go over so much ground. The hand with scythe will cut as wide a swath as he can, not a wide one truly; the other hand will follow and pull the cut vines back out of the mower's way. After remaining in winrows from half to one day, house, either in pens or narrow house as above. I lived in a section of the south, where the pea was planted alone for housing, and have known from 25 to 50 wagon-loads of the vine saved, I verily believe, on an acre. I was raised where peas, blackberries, and whortleberries, were articles of sale, and beg to be considered as knowing a little of the culture of the pea.

The Peach.—I have beds of this year's working that have grown two inches. The stocks are from the seed of last year's fruit, and I am certain if the seed be planted in good soil, and the stocks cultivated, that they will attain the height of three feet by the first day of June next, and be over one fourth of an inch in diameter. If allowed to grow one year, they will be an average three fourths to one inch in diameter, and from seven to ten feet high; if budded the second year, the grower will lose one year any how in bearing, and the heading be less certain, and the stock will be so much larger, that two years must expire before the scion will be of same size. Mr. Hatch, of Hatch & Co.'s nursery, assured me that he planted a peach-stone or *pit* in March (I think) of 1843. It was budded the same year, and headed down to a proper head, this spring it had blossoms, and measured one inch in diameter and full seven or eight feet high. The plan of budding on second year's stocks I have followed, and it may be best with you, but I think it wrong here. The failure in budding is full two to one greater, and a loss of one year.

Many persons prefer to bud in August and September, and fear to remove the trees, the next spring; I have done it, and moved them even to a distance of one hundred miles. They were out of the ground fifteen days, but carefully packed in a box of earth. I would not hesitate to bud in June, or even in May, and to remove in October and November, or February and March.

My plan to grow peaches, is to place the stones in a box of earth as soon as the fruit is eaten. Let the earth in the box be kept as is the earth in field or garden, by sinking it in the ground: in the spring about the time the seeds have burst their covering, take up the box, turn out the earth, and plant the seed or young stocks in rows three to four feet apart and a foot in the row; keep the earth well cultivated, and begin to bud in June. Examine when the bark slips easily, for it does so more readily at one time than another, the season making a difference—if very dry and on dry soil not so readily. By doing thus, the peach will bear the third season.

The Cotton Crop.—There is one thing certain, that many who now grow cotton must quit it, no one can grow cotton at $15 per bale, and pay $2 out of that for freight. We must grow less cotton and provide more of the necessaries, we shall then consume less of foreign make; this will again affect the article, but we shall be in better condition; for if we get only four cents per pound, we can count on having 50 to 60 per hand in money, instead of double that in meat, bread, &c.

Many farmers are now looking at this—they see and feel the consequence; yet they have been so long wed to the system pursued by their forefathers, that they can not meet the issue at once. The cotton-growing country can now grow three millions of bales; what effect such a crop would have I can not think, and fear to suppose. This quantity will be grown, and before consumption requires it, unless I am mistaken greatly. From all I can learn the corn-crop is large to an unprecedented degree; but it will not keep down the price next year. The last crop was good, yet not as heavy as appearances indicated, and being so very cheap, as low as 12½ cents per bushel, it induced a want of care; the consequence—price higher than for years before. There is a scarcity now; so soon as the growing crop is ripe enough to use, it will be used, and again there will be some want.

M. W. Philips.

Log Hall, Edwards' Depot P. O., Miss.,
June 26th, 1844.

MULBERRY-PAPER.

I have not been successful about getting the mulberry foliage worked, on account of preoccupation of the several paper-mills, nor has the bark been forwarded as I hoped; however, I enclose you a small specimen of that operated upon by the first process of steam. I had hoped before this to send some that had been dressed, but Mr. Conant, on whom I depended for it, has on hand so many other engagements that I find a difficulty in accomplishing the thing so much desired.

The temperature is so low that silk-worms feel it severely. I have never known so much inquiry however for foliage. This tells the story for those who have destroyed their trees, and shows the importance of multiplying them if ever silk is to be made. I have made liberal sowings of seed, and hope to have such a supply as to encourage some good silk-grower to take hold and carry out the business effectively, by hiring or taking the whole concern on shares for a succession of years. I can not devote my time to it without interfering with my office, and I should not have troubled you with any remarks, if you had not called on me when here a short time since and requested any new observations upon the silk culture.

D. Stebbins.

Northampton, Mass., July 8th, 1844.

BUTTER-MAKING.

The following communication was addressed to Frederick J. Betts, Esq., President of the Orange County Agricultural Society, and politely tendered us for publication; and as Mr. McWilliams' dairy enjoys a high reputation, we do so with great pleasure, notwithstanding other articles on this subject have already appeared in both our last and present volumes. Mr. McW., we see, differs slightly in his process of making butter from those before described, by adding cold water to the milk when poured into the churn, and commencing churning it at a lower temperature than usual. This must certainly increase the labor of bringing the butter, and we should like to know of him, whether it is compensated by superior quality, or an additional quantity. The richer milk is, the sooner butter comes, and we have often thought in butter-dairy districts, more attention should be paid to the quality of the milk than the quantity; for it is something of a consideration to the dairyman to have his butter come with as little labor as possible, and if as good a quality and as much in quantity can be had in fifteen minutes' churning as in two hours, it will amount in the aggregate to a great saving of labor. We wish, sincerely, that a series of experiments might be made between the better and poorer qualities of milk; for certain it is, if a cow which gives 10 to 12 quarts per day makes as many pounds of butter as another that gives 16 to 18 quarts, both consuming the same quantity of food, inasmuch as the milk of the former would churn to butter sooner than that of the latter, she should be preferred as a butter-cow, unless the extra quantity of butter-milk from the latter made up the difference in value of the labor in churning and milking.

Scotchtown, Jan. 3d, 1844.

Dear Sir: Having received your note of October 20th, wishing me to give a minute description of the process of my way of making butter, I cheerfully comply with your request. Willing to give what little information I am in the possession of, and hoping to get more information from the statements of several of our best butter-makers which you propose publishing. My farm consists of 103½ acres of land, 85 of which is under cultivation. In my dairy I keep from eighteen to twenty cows. The farm is elevated land suitable for grazing; the north end is the principal meadow. The buildings are placed near the centre of the farm, and from these the land gradually descends to the south. The southern part is watered with springs, the middle with wells and springs. The north with springs and a never-failing stream of water.

Our practice is not to churn the milk until it becomes thick or loppered, the milk and cream is then churned together. The temperature of the milk is about 50 degrees. In warm weather about a quart of cold water is put in each pan before the milk is strained, so as to keep it sweet as long as possible. The cellar-floor is brick. This in warm weather is daily cleansed with cold water. A drain from the cellar carries off the water thus applied. The churn is filled about half full with milk, with the addition of two pails of cold water before starting the churn. In cold weather the same quantity of warm water is applied. When the churning is finished, which usually occupies about two hours of time, there are then two more pails of cold water applied to raise the butter and cool it. The butter is then taken out of the churn and put in a large tray, this is immediately filled with cold water and the butter carefully washed; after which the water is thrown off. The butter now undergoes the process of salting, it is then placed in a cool situation where it stands about an hour, and worked carefully over. This finished it is placed in the same situation as before, where it stands three or four hours, and is again worked over; again replaced for five or six hours, when it is worked over for the third time. It is now replaced, where it stands till the next morning and worked over for the fourth time. A small quantity of nitre is then put in the butter. Thus finished it is placed in firkins holding about 85 lbs. Previous to packing, the firkin is scalded with hot water, rinsed and cooled with cold water, then rubbed all around with fine salt; this prevents the butter from adhering to the sides of the firkin. When the firkin is full, a linen cloth is placed over the top of the butter; on this cloth a covering of salt is put one inch deep, and cold water enough added to it to form a brine. It then stands till it is to be sent to market when the cloth and salt are removed, the firkin turned down, the top of the butter in the keg washed with cold water and the pickle drained off. The firkin is now neatly headed up and sent to market.

GEORGE S. MCWILLIAMS.

McCORMICK'S REAPING-MACHINE.

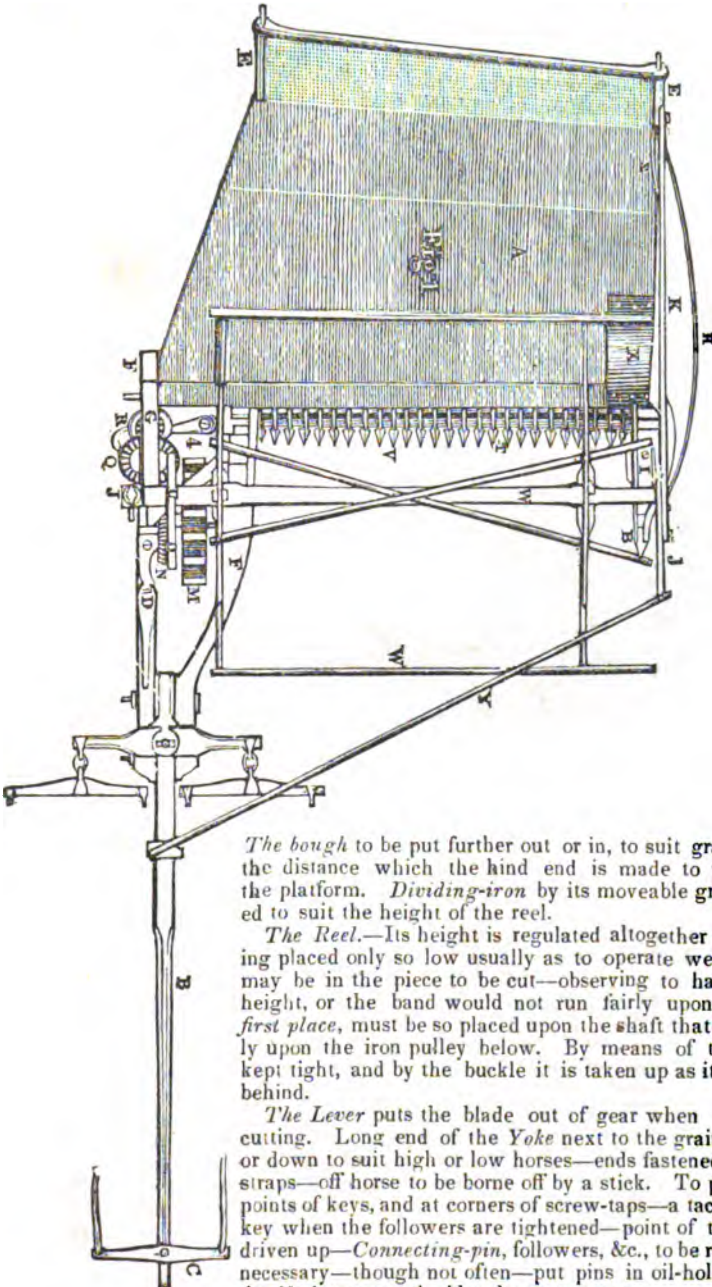
We have never seen this Reaper in operation, but understand that it is highly approved of and quite in demand in Virginia where it was invented. We have been shown certificates from several eminent practical farmers there, expressing their satisfaction of its performance on their plantations. Mr. McCormick is now on a tour in this state, for the purpose of introducing it into our large wheat-growing counties, and will proceed west as far as Michigan and Illinois on the same errand, and we trust the farmers in that quarter will give it a fair trial. So long as crops come in so abundantly, we must expect the prices of produce to rule low; it behooves the agriculturist, therefore, to avail himself of all possible improvements in culture and harvesting; he will thus be enabled to successfully compete with the foreigner, and supply distant nations cheaper than any other country can do. If prices fall we must endeavor to grow our products at less cost.

New York, July 5th, 1844.

I herewith transmit cuts of my Reaping-Machine, together with a description of the same.

Description.—B, the tongue; S, tongue-post, fig. 2.—C, yoke, fig. 1.—Y, front brace; F, D, hounds, fig. 1.—R, Q, G, wheel-post, fig. 2.—S, wheel-brace, fig. 2.—J, short reel-post, fig. 2.—A, platform, fig. 2.—A, out-joint piece, fig. 2.—K, small wheel-piece, fig. 1.—E, E, cloth-posts, fig. 1.—V, T, teeth; L, false-divider, fig, 2.—J, long reel-post; K, platform-brace; Z, side-board, fig. 2.—X, wheel-cap, fig. 1. —H, bough, fig. 1.—B, divider, fig. 1.—H, dividing-iron, fig. 2—M, main ground-wheel, fig. 1.—H, small ground-wheel; N, master cog-wheel; F, pinion, fig. 2.—Q, beviled-wheel; R, fly-wheel; W, reel-shaft, fig. 1.—U, reel-pully; W, W, &c., reel-ribs.

TOP VIEW OF REAPING-MACHINE.—FIG. 48.



DIRECTIONS.

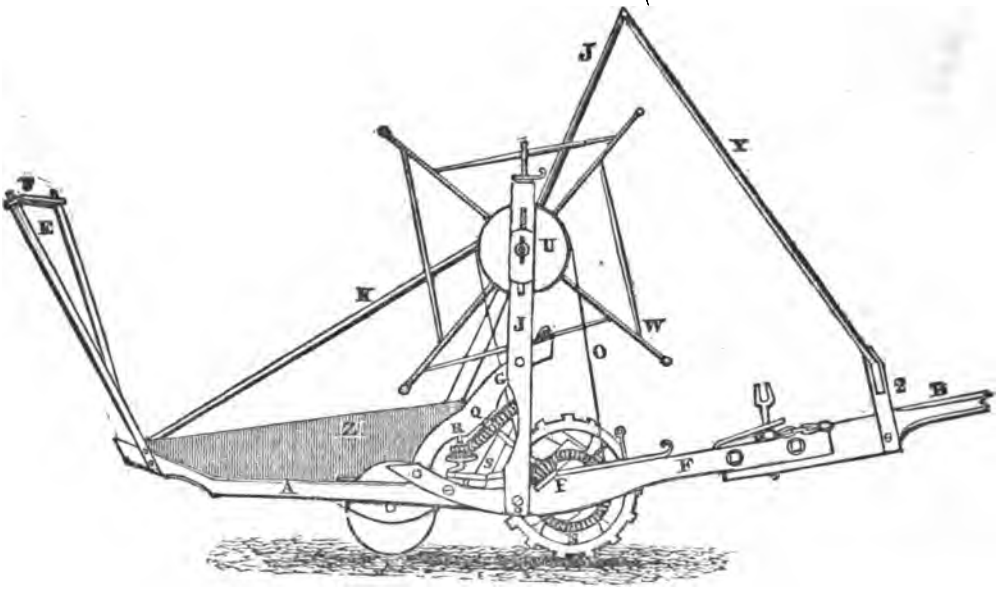
Nine and Eleven-Inch Shifts.—It will be observed in putting the machine together that there are two full shifts for cutting 9 and 11-inch stubble. These shifts are marked whenever an alteration is required to suit them respectively, 1 for the 9-inch shift, and 2 for the 11-inch shift. There is a pair of *followers* for each shift, and should a different shift be preferred to start with (as wheat may be long or short) from that suiting the followers *left in the driver*, they must, of course be changed. Should a shorter stubble than 9 inches be required for short oats on smooth ground, a half shift may be made at the *tongue*, without further alteration, except to make a small ground-wheel 3 or 4 inches less than the one to the machine.

The divider to be placed with the screw left about the middle of its mortice, and on a trial to be set out or in as may be shown best by the operation. As much grain should be collected by it as can be *well* cut. *The bough* to be put further out or in, to suit grain more or less tangled, by the distance which the hind end is made to pass through the frame of the platform. *Dividing-iron* by its moveable groove to be raised or lowered to suit the height of the reel.

The Reel.—Its height is regulated altogether by the grain to be cut, being placed only so low usually as to operate well upon the *short* grain that may be in the piece to be cut—observing to have the two ends of equal height, or the band would not run fairly upon the pulleys, which, *in the first place*, must be so placed upon the shaft that the band will work properly upon the iron pulley below. By means of the reel-screw the band is kept tight, and by the buckle it is taken up as it stretches—tail of the band behind.

The Lever puts the blade out of gear when the machine runs without cutting. Long end of the *Yoke* next to the grain, and hole in it turned up or down to suit high or low horses—ends fastened to the horses with leather straps—off horse to be borne off by a stick. To prevent accident put nails in points of keys, and at corners of screw-taps—a tack in the point of the driver-key when the followers are tightened—point of the key to be cut off when driven up—*Connecting-pin*, followers, &c., to be renewed of *hard* wood when necessary—though not often—put pins in oil-holes to keep out sand—grind the *blade* on smooth side when necessary.

Operation—At the commencement of harvest, when the wheat is often somewhat green and *heavy*, and the bands *unskilled* in the use of the *rake*, it must be expected that raking the wheat from the machine will be laborious, which, however, will become less and less so, as wheat ripens and hands acquire the art. The raker must walk well *forward, and close to the machine*, and throwing his rake entirely across the platform with a limber action, must take a strong hold upon the heads of the wheat, and at a quick draw bring it off without halting, rather against and behind his left, *never before him*. The heads must be drawn round, so that the buts will be left pretty much



SIDE VIEW OF REAPING-MACHINE.—FIG. 49.

toward the standing wheat, and *very neatly* when understood.

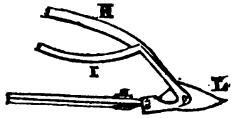
Shove back the wheat upon the platform after bringing off the sheaf (or more) so as to prevent a trail. In *heavy* wheat the raker and rider usually change places. At times, in short or in tangled grain, it may be found necessary to move it slightly upon the platform with the rake, before drawing it off, as a relief to the cutting. Horses should be kept close to the wheat.

C. H. MCCORMICK.

ALABAMA MARL.

WE have received from Alexander McDonald, Esq., of Eufala, Alabama, a sample of blue marl for analysis. To do this minutely would cost $5, we have therefore handed it over to Dr. Gardner for a general opinion of its merits, which will be found below. Dr. G. pronounces it a substance of considerable value, especially on clayey soils. Mr. McD. writes, "I have this year hauled up 400 bushels and spread it over my garden, mixed with compost manure, and I have never seen a more rapid growth of vegetation in my life."

We also received by the same conveyance, a sample of Mr. McD.'s premium cotton grown upon his farm last year, and spoken of page 221 of our last No. The lot from which this sample was taken, we are informed by Messrs. Cahoone, Kinney, & Co., cotton-brokers in this city, sold for at least one half cent per pound more than any other of a similar quality brought to New York last season. It was considered very superior.



Mr. McDonald writes us that crops are promising fairly in Alabama, though the stand of cotton and corn is rather small for the season; and that formidable enemy of cotton, the louse, has been somewhat destructive. He regrets that planters in that region confine themselves so exclusively to corn and cotton, and do not cultivate, as at the north, a more general rotation of crops.

We need not say that we shall be happy to hear from Mr. McDonald in his agricultural tour to Tennessee. We observe by the Southern Shield, that the Barbour County Agricultural Society had a spirited meeting at Glennville on the 29th May last. At the close of the proceedings Mr. McD. proposed the formation of two Farmers' Clubs, one at Glennville, and another at Eufala. We can not but hope that his proposition will be carried into effect, for such clubs have a beneficial influence wherever formed.

New York, July 9th, 1844.

DEAR SIR: I have examined the specimen of marl from Mr. McDonald of Alabama, in the manner you suggested. It contains from 5 to 10 per cent. of lime; but the quantity may be greater in different specimens, for it depends upon, and is according to the number of shells in it, so that wherever the marl has the whitest appearance, the quantity of lime will be greatest. The specimen is remarkable for the large quantity of silicate of potash it contains, perhaps as much as 10 to 15 per cent.

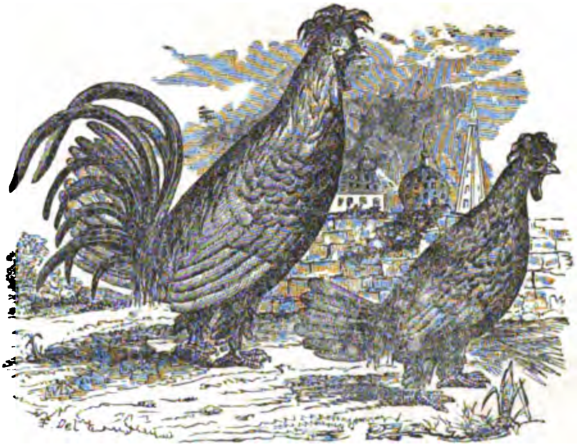
I have not examined it in other points of view. The basis is a fine sand, and the whole evidently of the tertiary geological formation. There is no question that it will prove a good fertilizer, especially on stiff lands of clayey basis; it will also be applicable to calcareous soils from the silicate of potash it contains. Wheat, oats, rye, corn, and grasses will be particularly benefited by it. The applications must be on a large scale because of the great insolubility of the silicate.

I take this opportunity of making a fact, recently discovered, known to your southern subscribers, which is important to the cotton-grower. That staple hitherto unexamined, is now found to contain a large quantity of phosphate of lime, (bone-earth,) so that 25 per cent of the ashes, which average 4 per cent. of the cotton consists of phosphates. Moreover phosphates applied in manure have been seen directly to benefit the crops in South Carolina. Shell-marls, the more shelly the better, always contain some phosphate, sometimes as much as 2 per cent. Such will therefore be found invaluable in the cotton regions of Alabama, Louisiana, Mississippi, &c., and ought to be eagerly sought for and even imported where amendments are wanting. Bones ground or reduced to a coarse powder contain about 50 per cent. of phosphate and must not be overlooked. Guano sometimes contains as much.

I have not examined the specimen submitted for phosphates, there probably is but a small quantity; if, however, in any part of the formation whence it is derived, the mass is almost entirely of shells, a fair per centage may be expected.

Yours truly, D. P. Gardner,
Lecturer on Agricultural Chemistry.

RUSSIAN FOWLS.—Fig. 50.



A few of this very singular and unique variety of fowls, were imported in 1842 from Moscow, by Dr. Wight of Boston, from which our portraits were taken. In a letter accompanying the portraits, the Doctor says, "I herewith send you a rough sketch of a cock and hen of the Russian or Siberian fowls. They came to hand a few weeks since, and are perfectly described in Dickson on Poultry. These were procured for me from Moscow and answer the description well, except that the feathers on the legs are quilled, which they will probably lose in the next generation, our climate being so much milder than that at Moscow."

According to Latham this breed differs from others in having large tufts of brown feathers springing from each joint, and some longer and fuller, like a Jew's beard, from the lower mandible. There is a tuft of upright feathers, of the same silky texture, springing from the backside of the head in the hen. The cock has a comb and wattles, the hen a comb only. This bird came from Moscow, and has fine variegated colors. The legs are covered with fine ordinary feathers; some have the plumage of the game-fowl, a fine tawney orange, spotted with black, and are highly esteemed in Scotland for prolific laying.—*Bement's Poulterer's Companion.*

MEXICAN SHEPHERD-DOG.

Although Mr. Kendall and some other writers have described this wonderful animal as a cross of the Newfoundland-dog, such, I think, can not be the fact; on the contrary, I have no doubt he is a genuine descendant of the Alpine Mastiff, or more properly, Spanish shepherd-dog introduced by them at the time of the conquest. He is only to be found in the sheep-raising districts of New Mexico. The other Mexican dogs, which number more than a thousand to one of these noble animals, are the results of a cross of everything under the sun having any affinity to the canine race, and even of a still nobler class of animals if Mexican stories are to be credited. It is believed in Mexico, that the countless mongrels of that country owe their origin to the assistance of the various kinds of wolves, mountain cats, lynxes, and to almost if not every four-footed class of carnivorous animals. Be this as it may, those who have not seen them can believe as much as they like; but eye-witnesses can assert, that there never was a country *blessed* with a greater and more abundant variety of miserable, snarling, cowardly packs, than the mongrel dogs of Mexico. That country of a surety would be the plague-spot of this beautiful world, were it not for the redeeming character of the truly noble shepherd-dog, endowed as it is with almost human intellect. I have often thought, when observing the sagacity of this animal, that if very many of the human race possessed one half of the powers of inductive reasoning which *seems* to be the gift of this animal, that it would be far better for themselves and for their fellow-creatures.

The peculiar education of these dogs is one of the most important and interesting steps pursued by the shepherd. His method is to select from a multitude of pups a few of the healthiest and finest-looking, and to put them to a sucking ewe, first depriving her of her own lamb. By force, as well as from a natural desire she has to be relieved of the contents of her udder, she soon learns to look upon the little interlopers with all the affection she would manifest for her own natural offspring. For the first few days the pups are kept in the hut, the ewe suckling them morning and evening only; but gradually, as she becomes accustomed to their sight, she is allowed to run in a small enclosure with them, until she becomes so perfectly familiar with their appearance as to take the entire charge of them. After this they are folded with the whole flock for a fortnight or so, they then run about during the day with the flock, which after a while becomes so accustomed to them, as to be able to distinguish them from other dogs—even from those of the same litter which have not been nursed among them. The shepherds usually allow the slut to keep one of a litter for her own particular benefit, the balance are generally destroyed.

After the pups are weaned, they never leave the particular drove among which they have been reared. Not even the voice of their master can entice them beyond sight of the flock; neither hunger nor thirst can do it. I have been credibly informed of an instance where a single dog having charge of a small flock of sheep was allowed to wander with them about the mountains, while the shepherd returned to his village for a few days, having perfect confidence in the ability of his dog to look after the flock during his absence, but with a strange want of foresight as to the provision of the dog for his food. Upon his return to the flock, he found it several miles from where left, but *on the road leading to the village*, and the poor faithful animal in the agonies of death, dying of *starvation*, even in the midst *of plenty:* yet the flock had not been harmed by him. A reciprocal affection exists between them which may put to blush many of the human family. The poor dog recognised them only as brothers and dearly-loved friends; he was ready at all times to lay down his life for them; to attack not only wolves and mountain-cats, with the confidence of victory, but even the bear, when there could be no hope. Of late years, when the shepherds of New Mexico have suffered so much from Indian marauders, instances have frequently occurred where the dog has not hesitated to attack his human foes, and although transfixed with arrows, his indomitable courage and faithfulness have been such as to compel his assailants to pin him to the earth with spears, and hold him there until despatched with stones.

In the above instance the starving dog could have helped himself to one of his *little brother* lambs, or could have deserted the sheep, and very soon have reached the settlements where there was food for him. But faithful even unto death, he would neither leave nor molest them, but followed the promptings of his instinct to lead into the settlement; their unconsciousness of his wants, and slow motions in travelling were too much for his exhausting strength.

These shepherds are very nomadic in character. They are constantly moving about, their camp-equipage consisting merely of a kettle and bag of meal; their lodges are made in a few minutes, of branches, &c., thrown against cross-sticks. They very seldom go out in the day time with their flocks, intrusting entirely to their dogs, which faithfully return them at night, never permitting any straggling behind or lost. Sometimes different flocks *are* brought into the same neighborhood owing to scarcity of grass, when the wonderful instincts of the shepherd's dogs are most beautifully displayed; and to my astonishment, who have been an eye-witness of such scenes, if two flocks approach within a few yards of each other, their respective protectors will place themselves in the space between them, and as is very naturally the case, if any adventurous sheep should endeavor to cross over to visit her neighbors, her dog protector kindly but firmly leads her back, and as it sometimes happens, if many make a rush and succeed in joining the other flock, the dogs under whose charge they are, go over and bring them all out, but strange to say, under such circumstances they *are never opposed by the other dogs.* They approach the strange sheep only to prevent their own from leaving the flock, though they offer no assistance in expelling the other sheep. But they *never permit* sheep not under canine protection, nor dogs not in charge of sheep, to approach them. Even the same dogs which are so freely permitted to enter their flocks in search of their own are driven away with ignominy if they presume to approach them without that laudable object in view.

Many anecdotes could be related of the wonderful instinct of these dogs. I very much doubt if there are shepherd-dogs in any other part of the world except Spain, equal to those of New Mexico in value. The famed Scotch and English dogs sink into insignificance by the side of them. Their superiority may be owing to the peculiar mode of rearing them, but they are certainly very noble animals, naturally of large size, and highly deserving to be introduced into the United States. A pair of them will easily kill a wolf, and flocks under their care need not fear any common enemy to be found in our country.

J. H. LYMAN.

RAISING TURKEYS.

HERETOFORE I have had so much difficulty in raising turkeys as to be almost discouraged, but of late have been very successful, in consequence of pursuing the following mode recommended to me by a lady, who said that she had no trouble with them.

When first hatched give no feed for 24 hours, then give a little *curd* made from buttermilk, increasing the quantity as they grow older, at the some time feeding the hen with whole corn. They should be secured from the wet, and by no means have Indian meal; but with the curd they may have in moderate quantities, wheat-bread soaked in buttermilk or crumbs of the same. I believe Indian-meal is fatal to the greater part of the young turkeys which die in the attempt to raise them. To allow them to wander too much is attended usually with considerable loss. I have found it a very good plan to make an enclosure of boards 6 feet square or so, and 12 to 18 inches high, and set this in a grass field during fine weather, in which to confine the young turkeys. This is removed occasionally from place to place, the chickens thus get all the fresh green food they may need, besides an abundance of insects.

CHARLES STARR, JR.

Mendham, N. J., July, 1844.

REVIEW OF MR. DANA'S CHEMISTRY OF SOIL.

In my last I promised to review Mr. Dana's chemistry of soil, which I regret having undertaken, for the whole essay is such a jumble of mineralogical, chemical, and logical errors, as almost to defy criticism.

Page 22, Mr. D. says, "Elements are substances which have not as yet been proved to be compound. Minerals are called simple which have certain definite, external, physical characters, though they may be composed of several elements. Rocks are called compound, which consist of several simple minerals, as granite which consists of quartz, felspar, and mica."

So, according to the logical acumen of Mr. Dana, compound minerals are simple minerals. We must bear in mind that this is in a treatise on the chemistry of soil.

Page 23, "The mineralogist merely names his mineral, labels it, and places it in his cabinet."

From several other observations of Mr. Dana's, he intimates, that a mineralogist knows nothing of the chemical constituents of minerals. There is a wonderful aptitude in the human family, each one to consider himself as the standard of perfection, and to measure everything by that standard; yet St. Paul tells us this is not wise. As Mr. D. has displayed such total ignorance of the components of primitive rocks in his geology of soil, he must conclude, of course, that all mineralogists are equally ignorant. I have been personally acquainted with scores of mineralogists, and never found one, until Mr. Dana, who could not give a tolerably accurate description of the chemical constituents of any mineral in his cabinet. The names given to many minerals give no indication of their chemical components; but he must be a poor mineralogist who is ignorant of them.

Mr. Brande says, "Mineralogy is a branch of physico-chemical science, which teaches the properties, *composition*, and relations of mineral bodies, and the art of distinguishing and describing them."

"There is no branch of science," says Sir J. Herschel, "which presents so many points of contact with other departments of physical research, and serves as the connecting link between so many distant points of philosophical speculation, as mineralogy. To the geologist, the *chemist*, the optician, the crystallographer, it offers especially the very elements of their knowledge."

Pages 23 and 24, Mr. Dana goes on to say, "The mineralogy of agriculture is no more than this, that the farmer be able ever to connect with a certain name, a certain chemical composition."

"The amount of this mineralogical knowledge is very limited. Seven simple minerals compose all rocks, viz; quartz, mica, felspar, hornblende, talc, serpentine, carbonate of lime. Other minerals are found in, but these seven compose all rocks termed geological formations, and which form the crust of the globe."

"The chemical constitution of rocks, the nature, properties, and relations of their elements, proves to be of the highest value, when it is known that the elements of these seven minerals are also the earthy parts of all plants."

It appears that Mr. D. has at last brought in carbonate of lime among rocks termed geological formations; although, at page 21, in his geology of soil, he merely gives 90 per cent. of silex, and only 85 of one per cent. of lime, and never mentions lime as having any existence in geological formations. As he has grouped lime among the primitive rocks, I presume he refers only to what is termed primitive lime-stone, not knowing probably that any of a newer formation had existence.

Let us compare the minerals forming the crust of the globe as given at page 8 of Mr. Dana's manual, with that at pages 23 and 24 in his chemistry of soil.

	Page 8.	Pages 23, 24.	
1st series.	Granite,	Quartz,	These three form Granite.
	Gneiss,	Mica,	
	Sienite,	Felspar,	
	Greenstone,	Hornblende,	
	Porphyry,	Talc,	
	Basalt,	Serpentine,	
	Lava,	Carbonate of lime.	
	Volcanic sand.		
2d series.	Sand,		
	Clay,		
	Gravel,		
	Puddingstone,		
	Conglomerates,		
	Sand-stones,		
	Slates.		

I consider myself as a very indifferent mineralogist, yet I could not have committed the egregrious blunder of grouping mica and talc as two distinct species of primitive rock, when it is well known, by the merest tyro in the science, that they are both of one species; talc being the sixth subspecies of rhomboidal-mica. See Professor Jameson.

Pages 24, 25, "Of the fifty-five elements, fourteen are found in rocks. This includes the elements of water, or oxygen, and hydrogen. Excluding the last, and retaining oxygen in its various compounds, there remain twelve substances only in rocks. Of the earthy and metallic eight; and of the volatile and combustible, four only are found in soil. These all are called by names so familiar, that their enumeration conveys at once an idea of their distinguishing properties. These twelve substances are divided, for the convenience of the farmer, into three classes. First, silicates—second, urets—third, salts. The term urets, is here only used provisionally, and it is by no means intended to burden science with a new name, an act to be deprecated, where an old one will as well answer. But there is no old term, which includes the substances to which, in the present subject, reference must be frequently made. It is more convenient to one to use a new term defined, than to enumerate by name, several substances, whose action in agriculture has a common character, whenever this action is mentioned. The word inflammable, or acidifiable combustible, the usual chemical designation might be used. But the farmer wants some more expressive term, which while it conveys all that is intended by the common word, shall also remind him of the peculiar character of those compounds with metals, and with each other, which by common consent ends in 'uret.' This word from the Latin, *uror*, to be burned, seems well adapted to express the character of inflammability, while, by its addition to carbon, &c., it forms the common chemical designation of the class when combined with metals."

According to Mr. Dana, the old names were so familiar, that their enumeration conveyed at once an idea of their properties; yet he undertakes to find what he terms a new name in place of the word inflammable, or acidifiable combustibles, and he takes the Latin word "uror," to be burned. By turning it into "uret," he establishes a generic term for all inflammable substances. The term "acidifiable combustible," also originates with Mr. D. Now it happens that some of the combustibles produce no acids, therefore Mr. D. must find another generic term to contra-distinguish these from the acidifiables.

Can it be possible that Mr. D. is so ignorant of the science of chemistry, as not to know that the term uret has been used from the commencement of the science, and can be found in every chemical nomenclature. and dictionary, that have been published? Does he not know that there are such terms as carb-uret, sulph-uret, phosph-uret, telluret, &c., &c., and used to describe the action of inflammable substances on metals, &c.? If Mr. D. had not informed us that he introduced it as a new term, we could not have given him credit for so large an amount of ignorance. He may rest assured, however, that when the chemical nomenclature requires altering, some one will be called upon to work it out, who understands the science.

It would have been much to the credit of Mr. D. had he submitted his manuscript to some scientific friend, and that friend could have persuaded him to have "*urorised*" it, instead of sending it to press. By such a chemical process he would not only have saved his own credit, but have prevented our farmers from reading a babelous confusion of nonsense under the cognomen of science.

It appears throughout Mr. Dana's work, that instead of making his manual plain to the farmer, he has gone out of his way to find isolated terms, some of them never having had existence in any creditable scientific work; and what is worse, he applies the selected terms in a way to make confusion worse confounded. Look at his organic constituents of soil, how he misapplies the term "isomorphism," pages 56, 57, and 58. Again, page 59, where he explains the term "geine." He says, "Ge is the Greek for earth, and the suffix ine, is in conformity to chemical names given to those vegetable or other organic products, whose independent existence has been determined; for example, quinine, morphine, &c." Our farmers would scarcely suppose that geine means merely the elements of the earth, and is as foreign from quinine and morphine, as Mr. Dana's manual is from true science. Again, page 60. "The first class, or non-nitrogenous, comprises three substances, which have been termed, 1st, extract of soil, or of humus; 2d, geine, or humic acid; and 3d, carbonaceous soil, or humin. These are chemically the same, passing from one state to the other, without changing the relative proportions in which they are combined." This is dancing a chemical trio very comically.

I can follow Mr. Dana no farther; his work is anything but scientific, and he has clearly shown us that he is unacquainted with geology, mineralogy, and chemistry. The work he has published is a curious jumble concocted in the brain of the writer, never having had any existence in acknowledged scientific works.

This work of Mr. Dana's has unfortunately been used by many of our intelligent agriculturists as a text-book, who have adopted the non-chemical terms, uret, humin, geine, geinic acid, humic acid, &c., without attaching any definite meaning to them. On attending some of our farmers' clubs in New York, I frequently heard them talking very learnedly on humus, uret, geine, &c., and never could conceive, until I read Mr. Dana's manual, where they obtained those terms. I know not what Mr. D. may think of imposing a confused mass of information on our farmers, under the sanction of mineralogy, geology, and chemistry, just as science began to be applied to agriculture, misleading them, and thereby bringing science into disrepute. Mr. Dana is not the only specious scientific writer in the field, they are springing up in every direction as thick as hops; and our farmers must be on their guard, or they will suffer severely in their pockets as well as in their minds, by these mushroom pretenders. What we want are facts, such as have been given by Mr. Pell and others; and when a series of such-like facts are collected to form the base, a science of agriculture can be reared that will benefit the human family for all future generations.

WM. PARTRIDGE.

N. B. In a few months, when I have time, I shall take a peep at Mr. Dana's prize Essay on Manures.

Having in our last volume given an able series of articles from the pen of Dr. Philips, an eminent practical planter of Mississippi, on the culture of Short Staple Cotton, we have now the pleasure of laying before our readers one equally deserving their attention, on that of the Long Staple. The respected writer of this has had 50 years' experience in the cultivation of Sea-Island Cotton on the coast of Georgia, and whatever he may have to say upon this subject, will be found worthy of attention. We feel no less honored than obliged, that gentlemen so truly practical and well qualified, should favor us with their communications on these interesting and highly useful topics.

CULTURE OF SEA-ISLAND COTTON.

THE Sea-Island cotton was introduced into Georgia from the Bahamas; the seed was from a small island near St. Domingo, known as Arguilla, then producing the best cotton of the western world. It in no way resembles the Brazil cotton which is the kidney-seed kind, introduced some years later, and which after trial, was rejected in Georgia.

This seed came in small parcels from the Bahamas in the winter of 1785. It gradually and slowly made its way along the coast of Georgia, and passed into Carolina, from the year 1790, to 1792. The winter of 1786 in Georgia was a mild one, and although the plants of the Sea-Island cotton that year had not ripened their seed: it being a perennial, and subject only to be killed by frost, it started the next season (1787) from the roots of the previous year, its seed ripened, and the plants became acclimated. Many changes have come over this seed since that time from difference of soil, of culture, and local position; and above all, from careful selection of seed. But it requires to be discovered, that what is gained in fineness of wool, is lost in the quality and weight of the product: for in spite of a zeal and intelligence brought to act upon the subject without parallel, the crops are yearly diminishing; until to grow Sea-Island cotton is one of the most profitless pursuits within the limits of the United States. (a)

The Culture.—When the Sea-Island cotton-seed was introduced in 1786, it was planted in hills prepared upon the level field, at five feet each way; but it was soon learned, that of all plants that grow, it is in its first vegetation and early stage the most tender; liable to suffer by storms, by wind, by drought, and by excess of rain. The quantity of seed was therefore increased, and the plants multiplied, until, as in most other cases, one extreme produced another. For many years, however, among experienced planters, the course is to divide their enclosed fields, into two portions; the one at rest, the other in culture.

Preparing the Land for the Crop.—Early in February, any hands not engaged in preparing the previous crop for market, are employed in cleaning up the rested fields, and either in burning off the fennel-weeds and grass of the previous year, or in listing them in at five feet apart, to serve as the base of the future ridges or bed. There is much difference of opinion, upon the subject of burning or listing in; for myself, I am inclined to take the first opinion, believing that the light dressing of ashes the field receives from burning off, is more beneficial to the soil than the decay of the vegetable matter, and renders it less liable to produce what is a growing evil, the rust, a species of blight, much resembling the rust or blight upon wheat, and which takes place about the same period, just as the plant is putting out and preparing to ripen its fruit. (b)

Ridging.—The land being listed in short lines across the entire field, at five feet apart, the operation of ridging is commenced about the first of March. The ridges occupy the entire surface; that is, the foot of one ridge commencing where the other ridge ends, and rising about eight inches above the natural level of the land, thus presenting a surface almost as smooth, and almost as deeply worked as a garden-bed. This ridging is carried on but a few days ahead of the planting. The ridge, if the operation has been carefully done, is from 2 to 2½ feet broad at top; it is then trenched on the upper surface with the hoe, six inches wide, and from three to six inches deep, depending upon the period of planting.

Planting.—In the beginning, if the seed is covered more than two inches with soil, the soil will not feel the influence of the sun, and the seed will not vegetate later; that is, in April up to the first of May, you must give from 3 to 4 inches of covering to preserve the moisture, or there, too, you fail from an opposite cause, the wind and burning influence of the sun drying the soil too much for vegetation. In most countries, after sowing the seed the roller is applied; but in cotton-planting, in our ridge-husbandry, the foot in covering the seed and pressing down the earth well supplies its place.

Quantity of Seed per Acre.—A bushel of seed is generally sown to the acre, I believe half a bushel is better; for where the evil comes, whether the worm, or wind, or drought, or wet, there is no security in the many; but on the contrary, where they come up thin, they soon grow out of the way of injury from any enemy.

After-Culture.—The cultivation of Sea-Island cotton is carried on by the hand-hoe, and the quantity always limited to four acres to the laborer. The operation of weeding commences as soon as we finish planting, because in our flat and sandy soils the grass-seed springs with the first growth of the cotton, and by the time we finish planting, say the first of May, what we planted in March requires the hoe. The land is kept in the operation of hoeing and weeding as far as may be, at its original level, the beds neither increased or diminished, that rains which generally fall with beating power, and in redundant quantity, in the month of August, may as little as possible injure the growing plants, which are then in full bearing. The young cotton is thinned out slowly at from six to twelve inches apart on the ridge, by the 10th of June. As soon as the rains commence, which is about the last of July, it is wise to leave nature to herself, and no longer disturb the soil; four hoeings if well done, and the grass well picked at each hoeing, is enough: nor does any after-growth of grass do injury.

Manures and Soiling Stock.—For ten years past, great efforts have been made by the Sea-Island planters, in manuring. Much of the alluvion of our salt rivers have been collected, and sometimes placed directly in heaps through the fields at rest, at other times placed in cattle-pens, on which cotton-seed, and all waste materials are strewn, and the cattle pounded up on it. But what is preferred, is to pen our cattle near the river at night, and cut salt-grass, which covers these alluvion lands, and which is as nutritious as so much clover. Many planters now employ laborers to cut the grass for horses and cattle, from the first of May till the last of November, the task required is generally a cord of grass to the hand; and this quantity will answer for 10 horses, or 15 head of cattle, for the night. Benefit has resulted from this course in the ratio of the extent to which it has been persevered in. The last year, Mr. Ruffin discovered that all South Carolina was underlayed by shell-marl, at various depths; from my own observation, and inquiries from others, I find the same thing exists in Georgia. Great benefits will result from this, I have no doubt, hereafter, depending much upon the discretion that is used in the quantity applied, which had better be too little I think, than too much. (c)

Amount of Crop per Acre and Picking.—It has been stated already, that 500 lbs. to the acre is about the medium crop, which at 20 cents per lb., (more than the actual price for the last three years,) is to the planter $100 for gross-crop; and from this hundred dollars is to be subtracted bagging, freight, expenses of sale, clothing for his people, medical attention, and too often provisions. Is this man to be envied?

In picking the Sea-Island cotton from the field, the same disproportion exists with his interior brethren, as in the other operations on the crop. From the exposure to sea-wind, and the necessity of guarding against every possible injury to the staple, the fields have to be picked over every two weeks, commencing in August, and ending in December; so that few planters receive from their people more than 25 lbs. of cotton per day during the picking season.

Preparation for the Market.—The Sea-Island cotton is now almost exclusively separated from its seed by the foot-gin, two wooden rollers placed the one over the other in a frame. The rollers are one inch in diameter, about a foot long, and are inserted in an iron journal supported by the frame; upon this journal a fly-wheel 30 inches in diameter is placed, the journal after passing through the fly-wheel has a crank to which the treadle worked by the foot is attached; the fly-wheel is to give a circular motion by the tread of the foot. This gin generally separates 25 lbs. of cotton per day to one hand. The whole labor of preparing a bag of 300 lbs. of cotton, in sorting the cotton for the gin, in ginning, and in moting after the gin, in again examining it, and in packing, my friend Mr. Seabrook of South Carolina, puts down at 54 days' work. I have estimated it at 60. Thus a bale of cotton worth $60, has cost after the cotton has been gathered into the house, 60 days' labor.

Locality of Sea-Island Cotton, Original Growth of the Lands, and Aborigines.—The Sea-Island cotton of the best quality is grown upon islands bounded by the sea on one side, and to the west by salt-rivers and salt-marsh. These islands extend from Charleston in South Carolina, to the river St. John's in Florida, including the whole coast of Georgia. This space may be considered 250 miles, between which points there is a safe navigation for open boats, and for dragging vessels of 100 tons capacity. These islands were originally almost exclusively covered with live oak, and from them the navy of the United States has been entirely built. These live-oak groves once swarmed with Indian tribes who communed with Sir Walter Raleigh and General Oglethorpe with confidence and friendship. Everywhere you find barrens scattered through the cotton-fields, constructed exclusively of oyster-shells. Indian bones and Indian pottery, and other remains, tell distinctly here, in ages past, that the red man lived and died.

Healthiness of Climate.—Volney, in his American tour, says that "the climate of this coast is the best in the United States, from Rhode Island south," and this my own experience confirms; carrying more men into old age, than any other I know of; here too has been little change of inhabitants for one hundred years past—the son clinging to the home of his childhood, and to the grave of his father. (*d*)

Thomas Spalding.

Sapelo Island, Ga.

(*a*) We beg leave to ask for information; is not this diminishing in the yield per acre, owing to the land being exhausted in a measure by severe cropping, of the proper food essential to grow the cotton? And were this material necessary for its growth, again supplied in the shape of manures, and a rotation of other crops, might we not expect, then, the same weight of cotton per acre as was obtained from the virgin soil? It was by continual cropping that the western wheat-fields in this state (considered at first inexhaustible) at length so rapidly deteriorated in their yield; and it is by the use of manures, such as plowing in green clover, adding lime, plaster, charcoal, ashes, &c., that these fields are now yielding larger crops, occasionally, than even in their pristine state. We doubt whether the alternate year of rest spoken of in the next paragraph by our correspondent, is sufficient to restore *all* the elements necessary for the growth of the cotton-plant; at least we have not found it so here in wheat, corn, and some other products; but having no experience ourselves in the culture of cotton, we speak hesitatingly, and can only reason from general principles.

(*b*) Our correspondent is unquestionably correct here in regard to the rust or blight; for we know in growing wheat, that it is far more likely to be thus attacked sowed directly after plowing in green crops, or fresh manures like those from the stable, abounding largely with organic matter. Lime, ashes, charcoal, sea-mud, marl, or fresh muck, (swamp-earth,) made into a compost with lime or ashes, as spoken of here in a subsequent paragraph by our correspondent, and used as a top-dressing, would be much less likely to be followed by rust, than the green crops plowed in as detailed above. We believe that manures, and above all, a *rotation of crops*, is as necessary for the south as the north, and we should feel greatly indebted by a series of articles on this subject from any of its intelligent planters.

(*c*) This has been proved by Gov. Hammond's experiments on marling, where he found a moderate quantity beneficial, and a large quantity hurtful—at least for the first two or three years. See our July number, page 221, second column. In New Jersey, excessive marling, especially in Monmouth county, so far from being prejudicial, has proved as we are informed, to be their best system—300 to 400 loads are put on to an acre in the same season. But it must be remembered that marl greatly differs in its composition; this spoken of in New Jersey, is supposed to be the upheavings of the ocean, and is much like sea-mud, abounding in rich organic matter and marine-shells, which immediately crumble on being exposed to the air, and become lime.

(*d*) We are glad to hear this. Excessive emigration is the curse of our country, and we doubt whether one fourth of those wandering forth into new regions better themselves by the change; while on the other hand, thousands die, or become hopelessly diseased, or prematurely old.

SOUTHERN AGRICULTURAL IMPLEMENTS.

THE consideration you have shown for the wants of the south, in your frequent articles upon implements suited to us, induces me to add my mite of information. I sent you a number of the Concordia Intelligencer, containing the reports of committees at our last agricultural show, and since then wrote you at some length on the trials of implements. Let me again urge you to impress upon your manufacturers of implements and machinery, and especially of plows, the great advantage they would derive, and the vast market they would open to themselves, by forwarding to our shows specimens of the articles they make. It is the determination of some few planters of us, here, to agitate the subject until we are supplied with such as we ought to have, and thus be enabled to meet the present low prices of cotton by an economy of labor.

Our heaviest item of plantation expense, is that for wrought-iron work; particularly to those, who like myself, have no blacksmith of their own. Until very recently, the most simple kind of work in iron cost 25 cents per pound—now it costs a general average of 18 cents. Even this I consider enormous. I should be glad to find a substitute as far as possible, in cast-iron. An excellent foundry recently established in Natchez, and which, *as yet*, charges only from 4 to 4½ cents per pound for castings, has enabled me to carry out my plans. And here I want information and advice. I infer from the fact of a people as sagacious and saving as the farmers of New England using cast-iron implements almost exclusively, that they must answer every purpose and be more economical. In Scotland, too, they are used to a great extent. But I have here such reiterated assurances that they will not answer, that I almost at times doubt about my own judgment. The objections are, the liability to break, extra weight, want of sharpness, and impossibility of supplying the want, and so on. Now tell us, how is all this?

We require, or rather we should have, a variety of implements. The great cost of everything but the common plow and hand-hoe, has prevented aught else being used. In some neighborhoods where there may happen to be good and ingenious blacksmiths, other implements are occasionally employed—such as the bull-tongue, or narrow single-shovel plow, for running on each side of the corn-row at the first tending; triangular, one-horse harrows; scufflers, or rough cultivators, with three to five teeth, somewhat like a common hoe; sweeps, skimmers, or spread-eagle or buzzard-plows; double-shovels, and double half-shovels, &c., &c. The cost and the difficulty of getting a good article, *sure to run well*, which is a great difficulty with wrought-iron implements not made by a master hand, has prevented even these improvements being commonly used. Cast-iron articles, with stocks so simple as to be easily made on the plantation, will I think meet those objections. Such a thing as Wilkie's horse-hoe will not suit us at all—too lengthy, complex, and expensive to put in the hands of a negro. Mr. Thorpe's three-share plow has the same objections, with the additional one of too great weight. Our teams can not drag along such a load of wood and iron as can your stronger animals, in a cooler clime—*one animal only* can be used to do the tending of the crop, which is done during the hottest season of the year, when one of our average-sized mules (which form our best and most economical teams) drags an implement weighing 50 or 60 pounds, ten hours in the day, between rows of tall cotton, corn, or cane, he has as much as he can possibly stand, and more, in many cases. Yet *he must do it*—there can be no cessation of work—everything on a *cotton plantation*, capable of working, *must work*.

Your northern-made implements cost us too much by the time we get them, passing through so many hands; and if we order them direct, we are buying a "pig in a poke," where we have only a published account and description to go by. It is on this account we are so desirous of seeing your northern implements well represented at our trial in the fall. *You* require a *heavy* as well as a strong plow, with great length of share and land-side to make it run steady in stony land. We *require* nothing of the kind. A plow, to suit us, must have *size*, and yet be light for man and beast—easy to handle among stumps and roots, on steep and short hill-sides, and among the young, delicate, and easily-injured cotton plants. When you send us a *light* plow, they are *so small* and slight as to be almost worthless—nothing but the merest *poney* will suit to hitch to them. We have no stones to trouble us, rarely any sod to cut—nothing but weeds and trash on light mellow earth—unless where almost ruined by being trodden by stock. Hence we require a plow that throws dirt well, not easily choked, and which turns a furrow 10 inches wide, and 5 to 6 inches deep, with two average-sized mules.

The best plow I have met with, *for all work*, is "Hall's Improved Peacock," No. 2, made in Pittsburg. It is a good sized breaking-plow, for two common-sized mules; covers up trash well, and of course, ridges well; cost I think, $6,50 or $7; is strong, yet light and handy. For a regular breaking-plow, on land not *too* hilly, and with a moderately strong team, and particularly where there is a stiff sod, or the ground has been trodden by stock, I have seen nothing to equal the Eagle Plow of Ruggles, Nourse, & Mason, with coulter and wheel—both of which are indispensable—which was tried at our last show. I afterward purchased it at $13, (too high a price,) and find it does excellent work. I sincerely hope that this and other firms will see fit to forward for trial here in October, specimens of their different sized plows and other implements; the more as you will observe that the Messrs. Holmes (of Natchez and Boston) will convey them, for that purpose, from Boston free of cost. This would open up a new and extensive market to them. Corn and cob-crackers, fanning-mills, grist-mills, thrashing-machines, straw and stalk-cutters, corn-shellers, grain-cradles, steel hoes, gin-stands, &c., are all in demand. If the makers of Batchelder's planting-machine have improved that excellent implement, so as to give it a little more strength, and to permit the attendant to see the corn as it drops, he may send one to our trial with the certainty of introducing it here. If it operates as the specimen one I had tried at Cincinnati, I will agree to purchase the one sent, and hand over the price to the president of our society to be remitted him. The objection made to it in the west, that it will not drop in hills that can be tended both ways, is no objection here, as we tend everything in drills. I know of no implement that would be of equal value to the planter. Thomas Affleck.

Ingleside, Adams Co., Miss., 27th May, 1844.

With respect to cast-iron plows, if properly made from good materials, and the mould-board *ground and finished smooth,* it works as easily, is as strong for all general purposes, and lasts as long, as the wrought-iron implement. In regard to supplying the south, we shall confer with our mechanics, and endeavor to meet Mr. Affleck's wishes.

A SHEEP-TROUGH.

I here give you a description of my sheep-trough, which I consider a very good one. Take two boards 8 inches wide, of common thickness and any length you may wish the trough. Lap the edge of one board over the other the whole length; then nail the two together; a cross section of the trough will thus form the letter V. Now take a piece of board or plank 14 inches wide, and 12 inches in length, and nail on to each end of the trough, so that it will stand about 8 inches from the ground. This finished, nail a strip of board about 3 or 4 inches wide to the middle of each end, so that it will come up 12 or 14 inches above the upper edge of the trough, then take a piece of board of the same width, and the whole length of the trough, and nail on to the top of the last named pieces; this will prevent the sheep from getting in to the trough and dirtying their feed, so that they will not eat it, and it will prevent them from jumping over it, thus we may always have a clean trough, which I find a very good thing. I have 30 ewes and 21 lambs that I feed with sliced turneps and corn every day.

Practical experiments are what we farmers want, and how we can make our land produce the most with the least expense. H. C. M.

Miller's Place, Long Island.

COAL-TAR AS A PAINT.

I think it would be well to call the attention of farmers to the use of coal-tar as a paint. The tar produced in coal gas-works is used extensively in England for painting fences, outbuildings, &c., and is being introduced in this country also. It never alters by exposure to the weather, and one or two good coats will last many years. It is the cheapest and best black paint that can be used. Our buildings are painted with it, all our apparatus also; and even the wrought-iron pipe we place in the ground, is coated with it. I think if its advantages were fully known, it would be generally used throughout the United States. The government soak the bricks used in building the fort at Throg's Neck in this tar, which renders them impervious to water; and posts painted with it are protected from rot when put in the ground, as effectually as if they had been charred.

Charles Roome.

Manhattan Gas-Works, New York.

IMPROVED FARMING IN MASSACHUSETTS.

During one of my late rambles in Massachusetts, I made the acquaintance of quite a young man who was bred a mechanic, but left with a poor worn out farm of 120 acres before attaining his majority. He felt so incompetent to manage this farm, and the prospect of a fair return from it for his labor was so unpromising, that he continued to work at his trade part of the time, and at grafting (which he had fortunately learned) at the proper season, and thus earned money enough to hire a man through the summer, and a stout boy through the year.

On his farm was one field of 20 acres which had been cropped with rye every other year, producing from 4 to 5 bushels per acre, the next year it would be left to lie fallow. This he seeded with clover, pastured sheep upon it three years, then planted it with corn and potatoes and made it completely mellow. After this crop was taken off in the fall, he sowed it with rye, bushed it in with a bush harrow made of white birches 20 feet long, inserted in a round pole 12 feet long, thus leaving the surface of the ground smooth and even. Plaster was then spread upon it at the rate of one bushel per acre, and the March following, on the same quantity of land, one bushel of red-top and Rhode Island-bent, 4 quarts of timothy, and 20 lbs. of large clover. Every seed seemed to take, for such a mat of grass I have seldom seen upon land. It has been regularly pastured every year since, and yields 2 to 2½ tons of hay to the acre, besides a large crop of fall-feed. His bog meadow he has drained and skimmed of its rubbish, carting the whole into his barn-yard, together with the muck from the ditches, and on this meadow now he has great crops of English grass. From under the old barn and sheds he has got out large quantities of salt-petre dirt; this he has mixed with other old manure, which has been accumulating for years, and with his yard manure he collected a sufficient quantity to enrich several acres of loamy land, from some of which he has obtained 36 bushels wheat per acre, and from 70 to 85 bushels corn, and on other parts of it seeded down to grass it is now producing 2½ tons, and in some instances 3 tons of hay per acre, and all these improvements have been brought about within a few years, without the aid of cash capital, or any other information than what he has gathered from reading agricultural papers.

Unless land can be properly prepared with manure and other stimulating articles, be plowed deep, well pulverized, judiciously seeded, and kept clear of weeds, it had better lie fallow. *Too much* grass-seed, in my opinion, *is just enough.* This young man sows on his land intended for mowing, 20 lbs. of clover and 12 quarts of herds-grass per acre. I have been looking over some of the English statistics of practical agriculturists on seeding lands to grass, and find in some instances they put on as high as 47 lbs. per acre of mixed seeds, while many of our farmers do not put on to exceed 10 or 12 lbs, one half of which is frequently killed out by drought or freezing, and the stalks of the remainder are not near enough together to be neighbors, and after being mowed the land looks like a barren waste.

I find three kinds of clover-seed used here in Massachusetts; the large Dutch, the June, the southern, and the white-clover—all ripening at different seasons of the year.

A Traveller.

AGRICULTURAL ERRORS.

Mr. Partridge is doing a public service in exposing the errors of the chemists in many of their dogmas relating to agriculture. "Chemistry applied to agriculture" is quite the rage now-a-days. I like it. It shows that improvement and investigation are active among thinking minds. But whoever swallows all the assertions of *theorists* in chemistry, as applied to husbandry and the soils, is prepared to swallow a great deal of humbug. The people knew something even in Hesiod's and in Virgil's day, and parts of their practice have been valuable from that time to this. Study, accompanied by thought, and steady, intelligent application, only, will ascertain exact truth in all this matter. No man can become a thorough farmer unless he read considerably, and think a great deal more. With these we can approximate to something like truth, and learn a good deal. Different soils, with different localities, climates, products, &c., &c., require different investigation, and sound discrimination in determining the right practice for each individual in managing his own husbandry. This is a prolific and inexhaustible subject, and may well employ the strongest minds. Simplicity, however, for the American farmer, should be a prominent object in all his agricultural operations. Cheap land and dear labor is what we have to deal with. Of course the land must do all it can, and the labor is to be applied where the least will effect the most.

Putnam.

SOUTHERN CALENDAR FOR AUGUST.

Make it a matter of special attention to have everything in readiness for picking cotton. It will require only the same time to prepare, and if done in season there will be no detention. Therefore, examine baskets, sacks, gin-stand, running gear, presses, &c., and if anything requires repairing, do it immediately. Continue your improvements all spare time, such as grubbing up bushes, &c.; repairing fences and buildings, making shingles, and scaffolds for drying cotton, and collect forked stakes and poles for curing tobacco. Top cotton early this month if it was not done last.

Cut crab-grass and throw it into heaps, there to remain for a day, and then into heavy winrows until cured. Gather fodder from late corn. Clear potato-plantings, designed for seed or slips. Thrash oats, rye, and wheat for fall sowing, to provide against loss of time from cotton-picking, when the seed will be wanted, and that the straw may be used to pack away pea-vines.

Prepare turnep-ground at once, if it has not been done before, and sow the seed about the middle of the month, rain or no rain. In the second volume of the American Agriculturist, Mr. Affleck of Mississippi, says: "Turneps are usually sowed in August or September, on ground enriched by penning the cows and other stock upon it some time previously, or what is still better, on a piece of newly-cleared land." Procure Dale's hybrid or any other good variety of seed, and sow half a pint to the acre. If the ground is not wet or there is not an appearance of immediate rain, it will be better to brush in the seed. The ground should be finely pulverized by the plow and harrow, then the brush will rather settle the earth to the seed than otherwise.

Cut such rice as may have ripened this month, and see it carefully stacked. Be careful to shut the water off the fields ten days at least before cutting.

About the middle of this month cotton will have sufficiently ripened to burst its covering, and will bear picking. Open the branches to the sun, that a freer circulation of air may pass through them, and the cotton will open sooner, and not rot in consequence of moisture.

Cut tobacco-plants as soon as they come to full maturity. This may be known by the leaves becoming mottled, coarse, and of a thick texture, and gummy to the touch; the end of the leaf, by being doubled will break short, which it will not do to the same extent when green. Do not cut it in wet weather when the leaves lose their natural gummy substance, so necessary to be preserved. When the cutting is to commence, procure a quantity of forked stakes, set upright, with a pole or rider resting on each fork, ready to support the tobacco and keep it from the ground. The plants should be cut obliquely, even with the surface of the ground, and should receive two or three smart raps with the back of the knife, in order to remove the sand or soil from the leaves; then tying two stalks together, they should be gently placed across the riders or poles, where they should remain in the sun until they become wilted. Then they should be carried into the drying-house and strung upon frames, leaving a small space between each plant that the air may circulate freely and promote the drying. As the drying advances, the stalks may be brought closer to each other, so as to make room for others. Exclude all damp air possible, and be equally guarded against the admission of drying winds, in order that the operation may not be too precipitate, except in the rainy season, when, the sooner the drying is effected the better. When the middle stem is perfectly dry, the leaves may be stripped and put in bulk to sweat. This is done more conveniently in cloudy weather, when the leaves are moist and more easily handled. The leaves should be assorted according to their qualities, and their stems kept all in one direction in the bulk, which should be two or three feet high, and of a proportionate circumference. To guard against the leaves becoming overheated, and to equalize the fermentation or sweating, after the first twenty-four hours, place the outside leaves in the centre, and those of the centre to the outside of the bulk. By doing this once or twice, and taking care to exclude the air from it, and leaving it in this state for about forty days, the tobacco will acquire the odor and other qualities desired. For further information, see General Hernandez' letter in Volume II.

Inoculate trees of this year's growth; procure none but the best and choicest fruit, and the labor will not be lost. For full directions see Northern Calendar for August. If your cabbages are eaten up by caterpillars in this month or next, be not discouraged. Although it will retard their growth until the insects are turned to moths or butterflies, they will afterward take a fresh start and flourish well.

Transplant cauliflowers, savory, and cabbage-plants which were sowed in April, for winter use. Water them if the weather be dry, and the garden will soon be supplied. Plant out fig-trees, and shade their roots with wet straw—sow parsnips, carrots, radishes, and onions, in order to have a succession of these vegetables.

NORTHERN CALENDAR FOR AUGUST.

Complete the haying and harvesting, and have all the ground intended for wheat and rye well prepared for the ensuing crop. Many excellent farmers in Massachusetts sow their rye on light lands, among their corn, harrowing it in two ways between the rows, and frequently adding clover also. This last is a good practice, as it matures the clover a year sooner; unless, as frequently happens, the drought of August and September kills the clover. A preference should, however, be given for that system of farming which enriches the soil to that degree, that an approximation to the corn-crop of Mr. Young may be realized, when there will be an effectual bar to the growth of rye, clover, or anything else but the main crop. Some pieces of after-math or rowen may now be cut, as it is excellent food for calves, lambs, and young colts, their masticators not yet having become adequate to grinding down the harder and more flinty grasses. It is questionable, however, whether it is policy to cut much rowen, as the advantage to the growth of the following season, is a sufficient compensation for its loss, unless its place be supplied with a good coat of ashes or compost. Look to your lightning-rods. There are more barns and stacks burnt in July and August from this cause, than in the other ten months. The gases now escaping from the fresh cut grass and grain, are excellent conductors for electricity, though not as good as an iron rod, and if you do not conduct it away by the latter, the former may conduct it into your mows and granaries, and thus the labors of the year be lost. Ruta-bagas are an exhausting crop, and it is well to supply the growing plant with a coating of ashes and plaster. By the first they are supplied with potash, which they take up largely, and, by the last, they are assisted in drawing nutriment from the atmosphere. Now is the time to save many of your seeds, a duty to be always attended to with the utmost caution and care. Save only the best, so that your future crops may be improving rather than deteriorating. Especially, save your own grass and clover-seeds. Timothy, orchard-grass, red-top, and clover, may be saved at one fourth the expense at which you can purchase them, and you may be sure of a good clean article, which you are not when you buy it elsewhere. The second growth of clover is suitable for seed, and this may be gathered by a machine somewhat like a fine rake, drawn by a horse, which pulls off the head while the stalk remains standing. To such as do not fear excessive seeding, and it would be well if they were more numerous, the seed thus collected, may be sown without thrashing and cleaning. Or it may be cut and thrashed. When rotation is desired with wheat, it is a better plan to turn in the whole crop when ripe, by which the soil is more benefited than by turning in a green crop, and the seeding is thus effectually done without additional labor.

The housewife should be careful to select the herbs during this month, (and every other when in season,) as they are now mostly in blossom. They should be cut when the flower is fully matured, and dried in the shade, and when thoroughly cured, placed in tight paper bags, so as to preserve the peculiar aromatic principle from insensible escape. Many plants, by this neglect, lose their efficacy and fragrance before they are used. Medicine is frequently afforded by these at a cheaper rate and of a better quality, than can be got of the apothecary. Cut, dry, and secure hemp in stacks or ricks.

Kitchen Garden.—Finish planting savoy and other cabbages for late autumn and winter use. In the early part of the month, spinach for fall use can be sown, and that for early spring use in the latter part of the month. To endure the winter well, the latter should be sown on dry gravelly ground. Turneps for autumn or winter use sow in the early part of the month. Plant now a crop of late celery, and continue to throw up the earth to the growing crops. Small salading can still be sown every week. If the weather be favorable, plant peas and kidney beans in the early part of the month. They may produce a good crop, although the chances are somewhat against it. Lettuce for fall use can be sown or transplanted from former seed-beds. Crops of melons and cucumbers keep particularly clean, and if the weather be very dry, moderately water them in the evening. Lima and Carolina beans hoe well, and all runners that trail upon the ground cut off; they only take sustenance from the bearing vines. Attend to the manure-heaps now, and keep them clear of weeds, which would otherwise ripen and grow in the ground on which the manure is placed the ensuing year.

Fruit-Garden and Orchard.—This month is the most suitable time for budding apples, pears, plums, cherries, nectarines, apricots, almonds, &c., and no farmer who wishes the luxuries of life at a cheap rate, should omit to select the choicest kinds of fruit-buds, and insert them in his own young stocks. We have the authority of Virgil and other old writers for saying, that it is best to inoculate at the joints where the bud is taken off, rather than between them, as is usual in modern practice. We intend to make the experiment this season on a few of our stocks. Keep the ground entirely clear among the seedlings and small trees.

Flower-Garden and Pleasure-Grounds.—Transplant from the seedling beds the various kinds of annual, biennial, and perennial flowers that were not transplanted last month. Plant your bulbs which may be out of the ground, such as crocuses, colchicums, narcissus, amaryllis, frittellaries, crown-imperials, snowdrops, lilies, irises, and martagons. Also take up, separate, and transplant the roots of pæonias, flag-irises, and other tuberous-rooted flowers, whose leaves are decayed. Suckers that have been thrown up from fibrous-rooted plants can be taken off and transplanted. Collect and transplant flowering plants from the woods and fields, removing them with a ball of earth, and cutting off their flowering stems if there are any. Water freely all newly-planted flower-roots, cut down the stems of those that have bloomed, loosen the earth about potted plants, clip hedges if omitted last month. mow the lawn once a fortnight. Keep clean and in order, the gravel walks, flower-borders and shrubbery. Trim and tie up straggling plants, and inoculate all you wish to propagate in that way. Gather flower-seeds as they ripen, but let them remain in the pods until the season for sowing.

FOREIGN AGRICULTURAL NEWS.

By the arrival of the Hibernia we are favored with our European journals to the 4th of July.

MARKETS.—*Ashes* have slightly declined and sales limited. *Cotton* has advanced altogether ⅜*d*. per lb. the last month, and the prices are now considered steady. The import into Liverpool from January 1st to July 1st, amounted to 896,000 bales, against 1,150,000 same period last year; the stock on hand was about 926,000 bales, against 912,000 last year—an enormous quantity, and the largest ever known. We see that a crop of 2,500,000 bales is anticipated in the United States, which considering the great loss by the overflow of the southern rivers, strikes us as being a large estimate. *Flour* and *Grain* are dull. In *Provisions* of the finer qualities more was doing; in other things we see no change worth noting, except in *Turpentine*, which has undergone a serious decline. *Tallow*, a trifle higher. *Money* abundant, and the rates of discount unchanged.

American Stocks. The transactions in these have been on a limited scale the past month and prices merely nominal. A better business was anticipated in the good stocks after the payment of the English dividends.

The Weather had been favorable, with considerable falls of rain latterly, and the wheat crop looked especially promising.

Rise of Wool.—Considerable of a rise in the prices of wool has taken place recently. In some instances it is selling from 30 to 45 per cent. higher than last year.

Incendiary Fires continue to an alarming extent in England; there had been 131 in the county of Suffolk alone since Christmas.

Subsoil Plowing.—Col. Scobell states that he had found it most valuable in many instances. In a farm of his at Buryan, it had almost worked miracles. It was a very foul estate, and by subsoil plowing, and rooting out the under weeds, his land and crops had been improved to a surprising degree. On the farm at Bortrea he subsoiled a portion of the land, leaving a strip in the middle not subsoiled. In the part subsoiled he had a good crop of oats, while on the portion not subsoiled he had very few.

Save the Fæces.—According to Boussingault, the solid excrements of man amount on an average to 1½ lb, daily, 5-4 lb. of urine, and ¼ lb. of fæces, and both taken together will amount to 547 lbs. in one year, which contain 16-41 lbs. of nitrogen, a quantity sufficient to yield the nitrogen of 800 lbs. of wheat, rye, oats, or of 900 lbs. of barley.

To Propagate Tender Roses by Cuttings.—Let a bed of well-fermented stable-litter and leaves be made by the side of a north wall, and place a one or two-light frame on it so as to face the north. In this put about eight inches of leaf-mould that has been previously well soaked with water; then spread over all about three inches of sharp pit-sand, and make the whole firm and level. The back part of a span-roofed pit, running east and west, with a wall in the centre, is also a suitable place for the purpose. It should be filled to within a few inches of the glass with the same kind of material. In selecting the cuttings, tolerably weak wood of the present year's growth should be taken, if it is sufficiently ripened at the base or has made one full-formed leaf. Strip the cuttings with the finger and thumb, and smooth the base, reserving the detached portion of the parent bark; cut them close above the first leaf, and insert them in the sand, but not so thick that their leaves will overlap one another. When this is finished the bed should be watered, to settle the soil about them, and they should have plenty of air for the first four days; but it ought to be lessened by degrees, so as to gradually inure them to a confined atmosphere. As the preservation of their leaves in a healthy state is essential to success, the bed may be formed and the cuttings put in on the same day, without waiting until the material becomes heated, as a thin covering of cellular tissue should be formed over the wounded end of the cutting before that takes place. In the third week the greater part will be rooted, and in the fourth they should be potted off into 60-sized pots, in a soil composed of leaf-mould and loam. They should be afterward removed into a damp frame or pit, without any water being given to their roots; but they may be slightly syringed over their leaves, and when they become well-rooted in the new soil, they may be hardened off and either shifted into larger-sized pots or planted out in a sheltered border, where they will make fine plants for next year.

Cuttings.—Nothing is better than silver-sand for striking cuttings in. If you use charcoal, it must be a very soft sort, and should be mixed with half its bulk of good soil.

Utility of Toads.—A person lately opened a toad in a wheat-field, and found 16 fresh beetles in its stomach, which the patient animal had probably snapped up while they attempted to cross the path. Toads are often kept with advantage on hot-beds for killing insects, and are among the gardener's best friends.

Root Excretions.—The most carefully conducted experiments show that excretions do *not* take place from roots.

Guano a Preservative of Flowers.—Those who are lovers of flowers, and delight in having them constantly in their rooms, may continue to keep them fresh for a very considerable time, by putting into the water a pinch of Peruvian guano, which is rendered immediately soluble and taken up by the cuttings. Guano is essentially different from all other manures: it possesses most of the constituents of plants, and contains a great portion of salt and other antiseptic, and yet the most fertilizing ingredients.

Bone-Dust and Sulphuric Acid.—Dissolve two or three bushels of fine bone-dust in 40 or 60 lbs. of sulphuric acid and apply this mixture to an acre of land, and it will generally produce as good a crop of turneps as 20 bushels of bone-dust.

Indian Corn.—In reference to Mr. Colman's remark upon Indian corn being well worthy of a trial as green food for cows, I feel convinced that this plant might be grown with much advantage for this purpose, even in the north of England, and much more in the south. Last year I grew about a score of plants of seed I brought from the north of Italy, which, from Mr. Colman's description of "the Canadian variety with small yellow ears," I should think were the same kind. These yielded so much excellent food for cows late in September, and they were so fond of it, eating cob half-ripe, leaves, and stalk, with the greatest relish; but I have this year sown all the seed I had, (two cobs,) and am only waiting for rain to transplant it. I should be very glad to induce others to try it in the south, and state the result in the autumn. It comes in for cow-food at a time when vetches are finished, when clover is much better eaten by sheep than cut again, and when it is wasteful to give turneps, as they are fast increasing in bulk and goodness.—*Gar. Chron.*

We often recommended Indian corn for soiling to the farmers of England when there, and have no doubt large quantities will eventually be exported for seed for this purpose. During the late dry season it would have grown remarkably well.

Deanston Farm.—We took the opportunity, while at Stirling, of visiting the farm of the celebrated Mr. Smith of Deanston. In the plantation adjoining the improved fields, the original state of the soil may be seen and compared with the same soil in its improved state. The contrast is very great. There are no open drains or ditches on the farm, nor open furrows or gaws of any kind. The plow used here has a moveable mould-board, which the plowman turns over at the land-end, then enters at the same place, the earth being always thrown to the same side.* The fields are thus laid out quite level, no land lost with open furrows, and no time spent in going round ridges in turning. This system answers well with Mr. Smith, who reaps his crops with a reaping-machine, and does not require ridges as a guide in harvest. At the entrance to each field the ground is paved about four feet within the gate, and to the road outside, to prevent the ground being poached with carts or cattle. The division fences (thorn hedges) all run parallel. A pump-well is fixed at the corner of four fences, and supplies, by means of troughs in each adjoining corner, water to four fields at once. The drains have never, in a single instance, required to be opened and relaid. They are formed entirely of broken stones. This farm (we believe about 150 acres in extent) is an excellent example of the benefits of furrow-draining, combined with that part of the system which is Mr. Smith's own—subsoil plowing.

Large Rhubarb.—Mr. Digby exhibited six stalks at a late show weighing 17 lbs.

Rooks Great Destroyers of Worms.—An old rook was recently killed having in its crop 19 large grub-worms and 17 wire-worms. However annoying these birds may be at times, this must be a convincing proof that they are decided friends to the farmers.

Novel Incubation.—A few days since a sitting hen-pigeon belonging to Mr. Morriss, was killed by a cat. Mrs. Morriss, having been confined to her bed for some years past, had the eggs brought to her, and placed them carefully in bed with her. The eggs were hatched on Tuesday last, and the young birds are living.

To Destroy Caterpillars on Gooseberries.—Take six pounds of black-currant leaves and as many of elder-leaves, and boil them in 12 gallons of soft water, then take 14 pounds of hot lime and put it in 12 gallons of water; mix these altogether: wash the infected bushes, and after that is done take a little hot lime and lay at the root of each bush which has been washed, and thus complete the operation. By these means the caterpillars will be destroyed without the foliage being in the least hurt. For a *preventive*, sprinkling the bushes with tar-water prevents the fly or moth from settling on the plant to lay its eggs, but this must be done early in the spring, for if done after the fruit is set it will taste of tar.

Nature has furnished a remarkable insect which assists more in the destruction of the caterpillar, the *Ichneumon Manifestator.* They lay their eggs in the bodies of the caterpillars, or pupa, which are then hatched, and feed on the substance of the caterpillars. It behoves therefore every person who regards his garden, to preserve the above insect with care, which so materially protects its produce from one of its greatest and most pernicious enemies. Destruction by hand-picking should, if possible, commence with the parent insect, in this fly, or perfect state, before it has deposited its eggs, for the gathering of moths, butterflies, and large wasps, may save the gathering of thousands of caterpillars, and the droning of hundreds of wasps, precisely as preventing weeds from seeding a garden will soon eradicate them altogether.

Test for Guano.—Put 500 grains of guano into a basin, pour half a pint of warm water on it, stir it well, let it stand to clear, and then pour off the clear liquor into another basin. Then add half a pint of warm water to the residuum, and repeat the same process. Add a third half pint of warm water; and, after pursuing precisely the same course, filter the residuum through filtering-paper, and then dry and weigh it. If the guano be good, the residuum will weigh from 150 to 200 grains, which quantity, deducted from 500 grains (the quantity originally employed) will show the proportion soluble in warm water, which is considered an index of its value, as the greater proportion of soluble matter it contains, the more valuable it is as a manure.

Guano.—A cargo from Chincha or the Bug Islands, recently arrived at Berwick. The captain states that he loaded his vessel (about 420 tons) in 48 hours, the guano lying as thick as 300 feet; and that, had it not been for the trouble of stowing, it might have been done in four or five hours. The guano was conveyed to the hold of the vessel by means of canvass hose. The Bug Islands are three in number, about 15 miles off Pisco, in lat. 14 deg. 23 S., long. 76 deg. 1′. There is a rock in the centre of the middle island, which is half a mile in diameter. The captain visited only two of the islands, and states that the air was very strongly impregnated with ammonia. The coast of Peru abounds with the article. He describes labor in general to be plentiful, and to be had at about 3*s.* a day English money; but he had to wait a month for his turn, as there were 30 vessels there. The population is principally a mixed race of Spaniards and Peruvians, speaking Spanish, and in the present undisturbed state of the country fond of plunder.

Substitute for Guano and Bones.—Mr. Dinsdale advises the collection of human urine, giving to it about fourteen pounds of sulphate of magnesia (Epsom salts) to every hundred gallons, and adding lime in the state of hydrate (that is, slaked.) Such a mixture contains all the elements of bones and guano; and although more than one private empiric and public company have adopted the process, for profit, it still remains comparatively unknown. I calculate more than one hundred gallons per month are thrown away in every minor farm-house, while in towns there is great waste in this way.

Alpacas in Scotland.—We have seen a male and female of the Alpaca species at Craigbarnet, Lennoxtown, Stirlingshire, which have been there for the last eight months, and they have stood the severe winter without injury, and we are assured are more hardy than our native sheep—they require *less* food, and could exist where sheep would die. There seems hardly to be any kind of food they will not eat—they eat turneps, hay, oats, and beans—they are more partial to meadow than rye-grass hay. These animals are now in the highest order and in the most perfect health—they are jet black, and follow their keeper like a dog, and are very elegant and interesting. The weight of the fleeces of last year was 17½ lbs. Their worthy owner is of opinion, when the navigation between us and South America is diminished as to *length of time*, which steam will most assuredly accomplish, thousands of Alpacas will be brought over—our hills will be covered with them, and they will become a source of great wealth and profit to the proprietors and farmers of the highland districts, for these animals will thrive upon that kind *of coarse bent*, which neither horse nor cow nor sheep will look at or touch.

---

* This is like side-hill plowing.—Ed.

Editor's Table.

Forgetfulness.—The following regular agricultural papers have taken the subjoined articles from us and omitted giving credit. We shall expect in their first issue after reception of this paper that they will correct the ommission.

Massachusetts Plowman of June 22d, "On Driving Sheep."
Southern Planter, page 167—"Lime and Charcoal."
Southern Agriculturist, page 276—"Statistics of Fruit."
Mississippi Valley Farmer, p. 133, "Shepherd Dogs."
The Central N. Y. Farmer, p. 183, "Cure for Hoven."
page 187, "Cure for Withers Coming Down."
" 188, "Superior Dutch Cheese."
" " "To Make a Sheep own a Lamb."

This is certainly a very modest appropriation for a single number.

The Maine Farmer appropriates half a column of our "Foreign Agricultural News," and credits the same to an "English paper." This matter we make up *condensed*, at considerable expense and labor from a large file of foreign journals; and according to the rules which govern the editorial corps, we are as much entitled to credit for it as if coined originally in our own brain.

So much for the *regular* agricultural journals. As for the *irregular* ones, we consider them like the Cossack hordes of a Russian army—*born to plunder;* and all is, when we catch them in the act, we make no words about the matter, but immediately cut them from the exchange list.

Saxony Merino Wool.—When at Northampton, Mass., in June, Theodore Strong, Esq., of that place, furnished us with a few *unchosen* samples of the wool from his beautiful flock of Saxon Merino sheep. They show careful and high breeding, and we doubt whether the quality of the wool can be surpassed in the United States. The fleeces are of good size, and the sheep hardy of their breed. Mr. Strong would dispose of a draft from his flock at reasonable prices, to any one desirous of being engaged in the wool-growing business.

Remedy for Films on the Eye.—Put a tea-spoonful of molasses on the eye-ball. I have relieved oxen, horses, cows, and sheep, in this manner, and know no other equal to it.—*American Farmer.*

Substances for Absorbing Urine.—Dr. Jackson's direction in the New England Farmer is: "Take twenty measures of dry peat and one of ground gypsum, and mix them together. Place barrels half full of this mixture in places where urine may be collected, and it will be found that the salts and ammonia of many barrels of urine will be consolidated in this mixture, without giving the slightest odor, or being in any way offensive, for the salts are taken up, and the carbonate of ammonia, formed by decomposing urea, is immediately absorbed. This method of getting rid of a nuisance and of consolidating a valuable liquid manure, full of the most useful salts, ought to receive attention. A mixture of peat or swamp-muck and gypsum (plaster of Paris) will also serve to absorb all the disagreeable gases of vaults, which will be converted into fertilizing compounds with the sulphuric acid of the gypsum and the organic vegetable acids of the peat."

To make Cornstalk Molasses.—For a very simple recipe to produce molasses, we like that practised by Mr. Humphrey, of Michigan, which we believe was communicated to the Prairie Farmer, and is as follows:

"Take the cornstalks as soon as they have their growth, or as soon as the tassel begins to blossom, cut them in pieces, boil them in a kettle for an hour or two, press out the juice any way you please and boil it down to a syrup."

Bees Preserved from Moths.—To prevent the moth laying its eggs under the hive, I have for the last several years cut a mortise in the bench about an inch deep and about two inches larger than the hive, and the hive is then set in this mortise, and the space of about one inch all around it is filled with mortar, then three-inch augur-holes are bored in the hive about two inches from the bench, for the egress and ingress of the bees, and a small augur-hole through the bottom of the bench to let off water should any get under the hive. I have near night watched the moths attempting to enter through these holes, and seen the bees chasing them away.—*Southern Planter.*

Keep the Oil of Milk in your Cheese—Stephen Yates, who keeps a dairy in Herkimer county, state of New York, says that he discovered that when milk was scalded in the usual way of making cheese, an oil would rise on the top and run off into the whey. This oil every one knows adds very much to the rich flavor of the cheese and should be retained. He directed that the milk should not be scalded, and he found that he not only retained the oil which is aromatic, but also the cream which otherwise would pass into the whey. He kept his cheese in the press until the linen wrapper was no longer moist, and then rubbed often with hog's lard. We have offered the above statement by way of hint to our dairy people of Maine. We hope they will inquire into the facts and see if the above statement be correct. If it should be, it is certainly an object to attend to the suggestion of saving the oil and not let it run off into the whey-tub and thence into the pig's trough. The whey is the pig's perquisite, but it is not worth while to *oil* it for him at the expense of the cheese.—*Maine Farmer.*

Fac Similies of Washington's Letters on Agriculture, addressed to Sir John Sinclair, being an exact engraving from the originals. Published by Franklin Knight, Washington, D. C.—price $2. Words can hardly express our gratification upon reception of this handsome quarto, containing a fac similie of the writings on agriculture of the greatest and best man that the world ever saw. We revere Washington above all other men; the motto of our own periodical is taken from his writings; and his precepts and examples we endeavor to follow as far as our poor abilities will admit, in giving tone to its character. This work of Mr. Knight's is a beautiful quarto of 72 pages, embellished with a lithographic portrait of Washington, a view of the mansion at Mount Vernon, and the tomb. The letters are written in a bold, clear, beautiful hand, which we could wish to see more often imitated. Of the value of their contents Mr. K. thus justly expresses himself:—

These letters, in the hand-writing of the Father of his Country, are on a subject of the deepest interest to every individual in our great and growing republic; and they are admirably calculated to impress the rising generation with the sentiment that agriculture is not only one of the most useful, but one of the most honorable pursuits of man. Washington recommended and urged the importance of establishing a *National Board of Agriculture.* In his speech on the opening of Congress, 5th Dec., 1796, he says, "It will not be doubted, that, with reference either to individual or national welfare, agriculture is of primary importance. In proportion as nations advance in population and other circumstances of maturity, this truth becomes more apparent, and renders the cultivation of the soil more and more an object of public patronage. Institutions for promoting it grow up, supported by the public purse; and to what object can it be dedicated with greater propriety? Among the means which have been employed to this end, none have been attended with greater success than the establishment of boards, composed of proper characters, charged with collecting and diffusing information, and enabled by premiums, and small pecuniary aid, to encourage and assist a spirit of discovery and improvement. This species of establishment contributes doubly to the increase of improvement, by stimulating to enterprise and experiment, and by drawing to a common centre, the results everywhere of individual skill and observation, and spreading them thence over the whole nation. Experience accordingly has shown, that they are very cheap instruments of immense national benefits." With this subject, it is to be hoped, that Congress will take into consideration the founding of an institution, near the seat of government, for instruction in the science of agriculture, in connexion with its practical operations. The plan of such an institution has been suggested to the public by the subscriber, while acting as the Agent of the Washington Manual Labor School and Male Orphan Asylum Society, which received the commendation of distinguished gentlemen in every section of the Union. Of the practicability of this plan, scarcely a doubt is entertained by any one; and it is believed that an enlightened community will encourage the speedy establishment of this school. The publisher of these valuable memoirs of him who was "*First in war, first in peace, and first in the hearts of his countrymen*," feels confident that they will be highly appreciated by every American, and regarded as precious relics which all will desire to possess.

The above work would be a very appropriate premium indeed for distribution by our State and County Agricultural Societies, and we trust that each of them will give liberal orders for this purpose. We are confident that it would be highly prized by the recipients, and be the means of effecting a great good, as much as Washington is loved and revered by his countrymen. Subscriptions received by Saxton & Miles, 205 Broadway, New York.

Wedgwood's Revised Statutes of the United States.—W. B. Wedgwood, Esq., of this city has prepared a very valuable work from the Constitution and Laws of the United States, designed for the great body of the people. It contains a mass of information that no citizen should fail to know. Mr. Wedgwood has prepared similar works from the statutes of the several states. For sale by Saxton & Miles, 205 Broadway. Price 50 cents.

Every Man his own Cattle Doctor. By Youatt & Clater; revised and adapted to the United States, by John S. Skinner. Lea & Blanchard, Philadelphia—price 50 cents. This excellent little work was obligingly sent us three months ago, and we wrote a notice of it at the time; but whenever the paper was made up the printer carelessly left it out, till at last it was lost. Now some one has had the kindness to pocket the volume from our table. May be he was an editor, got lost *accidentally* in a brown study, and in appropriating *our* Messrs. Youatt, Clater, & Skinner to himself, thought it was only an *article* from the Agriculturist to be transferred to his own paper as *original*. We shall feel under obligation to the delinquent if he will return it, as we think highly of the little work in question, and that the possession of it may be worth ten times its price to every farmer in the land.

Chemistry as Exemplifying the Wisdom and Beneficence of God. By George Fownes. We are glad to see the noble and important science of chemistry treated in so exalted a light as is here done by Mr. Fownes. It is a Prize Essay, written for the Royal Institution of Great Britain, and we scarce need add one of high value. It is very handsomely reprinted, in a volume of 158 pages, by Wiley & Putnam of this city.

The New England Fruit-Book, being a descriptive catalogue of the most valuable varieties of the Pear, Apple, Peach, Plum, and Cherry, for New England culture, with a colored engraving of the Bon Chretien Pear, and numerous cuts. By Robert Manning. Second edition enlarged by John M. Ives.—W. & S. B. Ives, Salem, Mass.; B. B. Mussey, Boston.

The New American Orchardist; or an account of the most valuable varieties of Fruit of all climates, adapted to cultivation in the United States; with their history, modes of culture, management, uses, &c.: with an appendix, on Vegetables, Ornamental Trees, Shrubs, and Flowers; the agricultural resources of America, and on Silk, &c. By William Kenrick, seventh edition, enlarged and improved, with a supplement. Otis Broaders & Co., Boston, Mass.

The first of the above works contains 130 pages; the last 450. Both are handsomely got up, and are well known as treatises of the best authority on the subject of fruits. We have looked over them with attention, and are highly pleased with their contents; and now that fruit has become so important an object of culture, not only with the amateur gardener but with the farmer also, these new editions are issued at a very appropriate time and we trust that they will have a large sale. They certainly deserve it, and we announce their recent issue with particular gratification.

The New England Farmer. Since our last, this favorite periodical has commenced its 23d volume, and comes out in a handsome new dress. It is published at Boston, Mass., by Joseph Breck & Co., weekly, in a quarto form of 8 pages, price $2 a year in advance. This excellent old paper is so well known that it needs little praise from such a junior as we are; and all we can say, is, the older it grows, the better it becomes; which if we can get any one to *think* the same of us, we shall be very glad indeed. We thank the Farmer for the elegant compliment it pays our correspondent, R. L. Allen, and think that not only *he* deserves it, but several others also who contribute to our columns, whom it might be invidious in us to mention. But why should it merely "*believe*" that *we* are "an experienced farmer." We have been more or less directly engaged in farming ever since we were a child big enough to toddle into a field, and we should feel quite mortified, and totally inadequate to the task of editing this journal, did we not *know* something of the *practice* as well as the *theory* of agriculture. If it were not for boasting, we should, like the late honest governor of old Massachusetts, to one who once doubted *him*, challenge the Farmer "to mow a field, or dig a crop of potatoes" against us by way of giving it a practical conviction of our knowledge of the farming art. Why, man, we can show you sickle-scars upon the *third* finger of our left hand, and axe scars upon our lower limbs and toes, besides sundry other things too numerous to mention, by way of proof if you need it, that we are quite a *veteran* in the *practice* of agriculture.

The Valley Farmer is a fresh laborer in the field, published in Winchester, Va., by J. P. Bentley, every Tuesday, in a quarto form of 8 pages—price $1 a year. It is a neat affair, and we hope it will receive sufficient encouragement to continue as a co-worker in the good cause in which we are embarked.

To Correspondents.—D. Stebbins, Charles Starr, Jr., T. Affleck, D. P. Gardner, and some others, are received and will appear next month.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, JULY 22, 1844.

ASHES, Pots,	per 100 lbs.	$4 06	to	$4 12
Pearls,	do.	4 37	“	4 44
BACON SIDES, Smoked,	per lb.	3½	“	4½
In pickle	do.	3	“	4
BALE ROPE	do.	6	“	9
BARK, Quercitron	per ton	23 00	“	24 00
BARLEY	per bush.	60	“	62
BEANS, White	do.	1 25	“	1 75
BEEF, Mess	per bbl.	5 00	“	7 00
Prime	do.	3 00	“	5 00
Smoked	per lb.	5	“	7
Rounds, in pickle	do.	3	“	5
BEESWAX, Am. Yellow	do.	28	“	31
BOLT ROPE	do.	12	“	13
BRISTLES, American	do.	25	“	65
BUTTER, Table	do.	12	“	15
Shipping	do.	8	“	12
CANDLES, Mould, Tallow	do.	9	“	12
Sperm	do.	28	“	38
Stearic	do.	20	“	25
CHEESE	do	3	“	7
CIDER BRANDY, Eastern	per gal.	42	“	44
Western	do.	35	“	40
CLOVER SEED	per lb.	7	“	8
COAL, Anthracite	2000 lbs.	4 25	“	5 25
Sidney and Pictou	per chal.	6 00	“	6 50
CORDAGE, American	per lb.	11	“	12
CORN, Northern	per bush.	50	“	51
Southern	do.	48	“	50
COTTON	per lb.	5	“	10
COTTON BAGGING, Amer. hemp	per yard.	16	“	18
American Flax	do.	16	“	17
FEATHERS	per lb.	27	“	30
FLAX, American	do.	8	“	8½
FLAX SEED, rough	per 7 bush.	9 00	“	9 75
clean	do.	10 00	“	10 50
FLOUR, Northern and Western	per bbl.	4 19	“	4 62
Fancy	do.	5 00	“	5 25
Southern	per bbl.	4 12	“	4 62
Richmond City Mills	do.	6 00	“	— —
Rye	do.	2 75	“	3 12
HAMS, Smoked	per lb.	5	“	10
Pickled	do.	4	“	7
HAY	per 100 lbs.	40	“	45
HIDES, Dry Southern	per lb.	9	“	11
HEMP, Russia, clean	per ton.	175 00	“	180 00
American, water-rotted	do.	140 00	“	180 00
do dew-rotted	do.	90 00	“	140 00
HOPS	per lb.	7	“	9
HORNS	per 100	1 25	“	5 00
LARD	per lb.	5½	“	6½
LEAD	do.	3½	“	4
Sheet and bar	do.	4	“	4½
MEAL, Corn	per bbl.	2 44	“	2 62
Corn	per hhd.	11 75	“	12 00
MOLASSES, New Orleans	per gal.	28	“	30
MUSTARD, American	per lb.	16	“	31
OATS, Northern	per bush.	29	“	31
Southern	do.	26	“	27
OIL, Linseed, American	per gal.	73	“	75
Castor	do.	90	“	95
Lard	do.	55	“	60
OIL CAKE	per 100 lbs.	1 00	“	— —
PEAS, Field.	per bush.	1 25	“	— —
PITCH	per bbl.	1 12½	“	1 37
PLASTER OF PARIS	per ton.	2 12	“	2 25
Ground, in bbls. of 350 lbs	per cwt.	1 12	“	— —
PORK, Mess	per bbl.	8 25	“	10 00
Prime	do.	6 00	“	8 00
RICE	per 100 lbs.	3 00	“	3 50
ROSIN	per bbl.	58	“	75
RYE	per bush.	62	“	63
SALT	per sack	1 31	“	1 50
SHOULDERS, Smoked	per lb.	4	“	6
Pickled	do.	3	“	4
SPIRITS TURPENTINE, Southern	per gal.	34	“	35
SUGAR, New Orleans	per lb.	5	“	8
SUMAC, American	per ton	25 00	“	27 50
TALLOW	per lb.	6	“	7½
TAR	per bbl.	1 56	“	1 69
TIMOTHY SEED	per 7 bush.	10 50	“	12 00
TOBACCO	per lb.	2½	“	6½
TURPENTINE	per bbl.	2 15	“	2 37
WHEAT, Western	per bush.	88	“	95
Southern	do.	85	“	90
WHISKEY, American	per gal.	22	“	24
WOOL, Saxony	per lb.	45	“	55
Merino	do.	40	“	45
Half-blood	do.	35	“	40
Common	do.	25	“	30

New York Cattle Market—July 22.

At market, 1200 Beef Cattle, 600 from the north The number of Cows and Sheep we are unable to give on account of the death of the keeper of the Register.

PRICES.—*Beef Cattle*—Were poorly sustained, and we can not quote higher than $4 to $5.75 as the price of best cattle.

Cows and Calves.—Sales at $16 *a* $27.

Sheep and Lambs—$1.25 *a* $3.75 for sheep, and $1 25 *a* $2.50 for lambs.

Hay—New is in good supply at 4 *a* 5 shillings per cwt. ; and old at 75 cents.

—

REMARKS.—*Ashes* continue in good demand for export; the late foreign advices, though slightly unfavorable, have had no effect upon our market. *Cotton* advanced ¼ of a cent after the arrival of the Hibernia, but it seems doubtful whether this advance can be maintained in face of a reasonably coming crop, and the unprecedented large stock on hand in Europe. Export from the United States since 1st September, 1,540,401 bales ; same time last year, 1,959,913; same time year before, 1,412,740. *Flour* is brisk with a moderate stock on hand. *Meal* dull. *Wheat*, *Rye*, and *Corn* in good demand ; other kinds of grain little sought after. *Hay* brisk. American *Hemp* firm, with an increased inquiry. *Molasses* is advancing. *Naval Stores* the same. *Provisions*. There seems to be some speculative inquiry in regard to *Beef*, *Pork*, and *Lard*, and prices are well sustained, with the prospect of an advance. The stocks on hand at the west are found to be much lighter than were supposed. *Rice*, a short supply in market. *Sugar*, declining. *Tallow* very brisk. *Tobacco* more sought after. *Wool* in very good request indeed, and prices have advanced. They are now full 40 to 45 per cent. higher than last year at this time, and will pay the grower a handsome profit.

Money is worth from 4 to 6 per cent. according to the paper offered.

Stocks buoyant, without material change.

Business generally is commencing brisk in town, and promises to be a good one for the fall.

The weather. Over such a vast country as the United States, it is quite impossible to gather up and fuse into one mass all that relates to this interesting topic; we hope, therefore, it will not be expected of us. At the North, especially along the seabourd, they have suffered considerably from the drought, and the late hay crop is consequently lighter than was anticipated. Other things are looking well. In the middle states we have had genial showers, and complaints are partial, being confined to narrow localities. Hay has proved a good crop. Wheat is nearly all secured ; and although the worm, weevil, fly, rust, and mildew have done more or less injury, still the crop will unquestionably turn out more than an average the country over. An uncommonly large breadth of land was sowed last autumn. Rye has been very heavy. Oats and Barley good as far as cut. Potatoes, Corn, Hemp. Tobacco, and Cotton are looking well. The continued floods of the Mississippi and its branches have greatly lessened the products of corn and cotton for the coming year. The loss in growth of the latter is estimated from 200,000 to 250,000 bales; probably the smallest amount supposed would be nearest the truth. Of corn, no one seems disposed to give us an estimate in bushels ; $9,000,000, however, would scarcely cover the whole loss of crops, cattle, &c., in the Mississippi valley by the late disastrous floods. The rise in the waters there we believe has scarcely been equalled within the memory of man, and we hope that all who can, will contribute their mite to repair the disasters of our fellow sufferers in that quarter.

GREAT SALE OF ELECTORAL SAXON SHEEP.

The undersigned will sell at vendue, the two flocks of *pure Electoral Saxon Sheep*, belonging to the estate of the late Henry D. Grove, as follows: 1st. That at Granger, Medina county, Ohio, consisting of about 400 sheep, on the 30th Sept., next, on the farm now occupied by them. 2d. The home flock, at his late residence in Hoosick, Rensselaer county, N. Y., consisting of about 350 sheep, on the 15th Oct., next. A rare opportunity is offered to those who may be anxious to improve the quality of their flocks. The following is the opinion of the distinguished manufacturer who has usually purchased Mr. Grove's wool, of the character of these flocks:—

“The purest blood in this country was introduced by the late Mr. Grove in his own flocks, the wool of which I have been familiar with since their importation in 1827. In point of fineness and admirable *felting* qualties, this wool is unsurpassed by any flock in this country, and the fleeces average about half a pound each more than any other I am acquainted with.”

SAMUEL LAWRENCE.

Lowell, April 9, 1844.

The terms of the sales will be cash. Reference, Samuel Lawrence, Lowell, Mass., or the subscribers.

ELIZA W. GROVE,
W. JOSLIN, } Administrators.
S. A. COOK.

Buskirk's Bridge, N. Y., April 20, 1844.

NEW YORK AGRICULTURAL INSTITUTE.

The great demand for scientific information in its bearings upon Agriculture, both among those already engaged in the art, and others entering upon it as a profession, has induced the subscriber to make arrangements for a full course of instruction during the ensuing winter. For this purpose a lecture-room and all necessary fixtures have been secured in THE UNIVERSITY OF NEW YORK.

Lectures and recitations on the sciences connected with AGRICULTURE, with applications to practice, will take place daily. Numerous opportunities will occur of examining the improved farms, market-gardens, nurseries, orchards, vineyards, and conservatories which abound near the city. Agricultural implements and other appliances of the art can be freely investigated; students can also attend PROF. DRAPER'S lectures on *Chemistry;* and PROF. PATTISON'S on *Anatomy and Physiology.*

Full instruction in the ANALYSIS of soils, the ashes of plants and saline manures forms another principal study of the course. The student will conduct these analytical inquiries himself, so as to become proficient.

The Institute opens on the 1st Monday of November, and closes on the 1st of March. Fee for the course on agriculture $20. Analysis $30. For both $40. Board and lodging can be procured near the University at $2.50 to $3.00 per week.

The courses on Agriculture and Analysis will be undertaken by the subscriber, with such assistance in the latter as may be necessary.

D. P. GARDNER. M. D.,
Formerly Professor of Chemistry and Botany
in Hampden Sidney College, Va., Consulting
Chemist to the New York Farmers' Club, &c.

For further information, or a prospectus, address, post-paid, Dr. Gardner, 412 Fourth street.

Reference is made to the following gentlemen who formed a part of the class in Agriculture last winter:—

R. L. Pell, Shepherd Knapp
J. Brinkerhoff, H. Leroy Newbald,
Arch. Russell, Gouverneur M. Wilkins,
Hugh Maxwell, R. Jaffray.

VALUABLE NEW WORKS,

JUST IMRORTED.

Encyclopædia of Farm and Cottage Architecture,	$16.00
Hutchinson's Treatise on Draining Land,	2.75
Greenwood's new method of Lifting Trees,	2.25
Stephens' Practical Irrigator and Drainer,	2.50
Whitley's Application of Geology to Agriculture,	2.50
Black's Practical Treatise on Breeding,	3.50
Rham's Dictionary of the Farm,	3.00
Farming for Ladies, 1 vol.,	2.50
Falkner's Muck Manual, 1 vol.,	2.00
Gardener and Practical Florist, vol. 2,	2.50
Neil's Fruit, Flower, and Kitchen Gardener,	1.75
Stephens' Book of the Farm, part 1st,	1.25
Hunter on the Scotch Swing Plow.	1.50

Imported and for sale by WILEY & PUTNAM,
161 Broadway, N. Y.

☞ Single copies of books imported to order, per steamer, and a return of the same received in six weeks.

BEMENT'S AMERICAN HOTEL,

No. 100 STATE STREET, ALBANY,

Is now open for the reception of company, having undergone a thorough repair and complete renovation from the cellar to the attic. It has been newly furnished throughout, and in quality of beds, cleanliness, and airy rooms, will now compare with any other establishment in the city.

In location, this house has many advantages, being situated in the centre, and on one of the most beautiful streets in the city; within a few moments' walk of the Eastern and Western Railroad Depots and the landing of the Steamboats; about midway between the Capitol, Public Offices and the Banks, Post-Office, and the business parts of the city; rendering it very convenient for the man of business, as well as the gentleman of leisure.

The subscriber places much reliance on the countenance and support of the AGRICULTURISTS throughout the Union, who may visit the city, and pledges himself to spare no exertions to render their stay agreeable, should they favor him with their company.

Three Hills Farm will be carried on as usual, under my own superintendance, by a careful manager, and the breeding and rearing of improved stock will be continued as heretofore.

C. N. BEMENT.

Albany, June, 1844.

JUST PUBLISHED,

COLMAN'S AGRICULTURAL TOUR.

The first part of Rev. Henry Colman's Report on European Agriculture and Rural Economy, is received. The work will be completed in ten numbers, at $5,00, $2,00 to be paid on the delivery of the first number.

SAXTON & MILES,
205 Broadway.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 miles, without the State.

ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume I. and II. of THE AMERICAN AGRICULTURIST, with tables of contents complete, for sale at $1,00 each; elegantly bound in cloth, $1,25. These are handsome, tasteful books, and make very desirable premiums for distribution with Agricultural Societies, and should also find place in all our District School Libraries. They constitute the best and most complete treatise on American farming, stock-breeding, and horticulture, extant. When several copies are ordered, a liberal discount will be made.

Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway. New York.

ICHABOE GUANO.

The subscribers have received by a late arrival from Liverpool, a few hundred weight of this superior guano, pure as imported from Africa, being taken direct out of the ship Clydesdale, arrived at Liverpool docks. A writer in the London Gardener's Gazette, June 8, 1844, remarks: "The competition for this guano in the colonial market was so great, that two cargoes were sold in about twenty minutes. The desire for Ichaboe guano has arisen from the fact that all the eminent chemists who have analyzed it, found it to possess the fertilizing properties in the highest degree: and the result of its application by practical agriculturists have proved the correctness of their analysis. This island (Ichaboe) on the western coast of Africa, which three years since was unknown, is about a mile and a half in circumference, and is deeply covered with guano, the deposite of sea-birds that have for ages remained undisturbed in their possession."

Price $6 per hundred pounds, or $1 for 16 pounds, (which is sufficient for 40 gallons of water,) put up in neat boxes; also 7 lb. boxes for 50 cents. It should be applied in a liquid state, and immediately after a rain. A liberal watering with this liquid once a fortnight is sufficient for vegetables, Indian corn, potatoes and turneps, and once a week for flowers in pots, and dahlias, tuberoses, and chrysathemums.

Also, the best of Artificial Guano, made from an exact analysis of the real, in boxes of 20 lbs., at $1 per box; or 10 lbs. for 50 cts.

3t. J. M. THORBURN & CO., 15 John st.

CONTENTS OF AUGUST NUMBER.

	Page.
To Exchange Papers, Weeds, Plaster no Longer Beneficial,	225
Farm of Mr. Clift,	226
The Egg-Hatcher,	228
Improved White Flint Wheat,	229
A Half Durham and Ayrshire Bull, Sketches of the West, No. 5,	230
Sowing Rye and Grass-Seed among Corn, Agricultural Education, Show of the N. Y. State Agricultural Society,	232
Patent Safety-Rein, New York Farmers' Club,	233
Culture of Tobacco, No. 3, D. P. Gardner,	234
Too Much Land, C. Casse,	235
The Cow-Pea and Peach, M. W. Philips,	236
Mulberry Paper, D. Stebbins, Butter-Making, George S. McWilliams,	237
McCormick's Reaping-Machine, C. H. McCormick,	238
Alabama Marl, D. P. Gardner,	240
Russian Fowls, Bement's Poulterer's Companion, Mexican Shepherd-Dog, J. H. Lyman,	241
Raising Turkies, Charles Starr, Jr.,	242
Review of Mr. Dana's Chemistry of Soil, Wm. Partridge,	243
Culture of Sea-Island Cotton, Thomas Spalding,	244
Southern Agricultural Implements, Thomas Affleck,	247
A Sheep-Trough, H. C. M., Coal-Tar as a Paint, Charles Roome, Improved Farming in Massachusetts, A Traveller,	248
Agricultural Errors, Putnam, Southern Calendar for August,	249
Northern do. do.	250
Foreign Agricultural News,	251
Editor's Table, Forgetfulness, &c.,	253
Review of the Market,	255

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. III. NEW YORK, SEPTEMBER, 1844. NO. IX.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

ROOT CROPS.

The greater part of these, with the exception of turneps, should be dug the last of this month, and pitted or housed, especially in the northern States. If kept much later in the ground, they become saturated by the heavy rains which usually commence in October, thus losing much of their flavor, besides rendering them liable to be injured by frost, the rot, and other diseases. Great losses are annually sustained by not securing our roots in good season. Last year it was calculated that the early snows in the northern States destroyed one fifth of the whole crop. In many places they were half lost, and in others totally so—not enough being saved to pay for harvesting; many farmers, consequently, were obliged to purchase not only their year's consumption, but seed for planting the following spring. Few roots, save turneps, grow much after the first of October, and what growth they do attain is of a cold, watery nature, with little or no nutriment in it. For making cows give delicious milk in winter, which will usually produce as sweet and yellow butter as summer pasture, we know of nothing equal to sugar-beet; parsneps and carrots come next. Potatoes are very good, especially if a mealy kind; they are generally considered, however, better for fatting than making milk. Turneps are excellent for sheep and store beasts; but if fed to cows they usually give an unpleasant taste to the milk, which is difficult to be got rid of.

For an excellent article on the best manner of storing roots, we must refer to page 268 of our first volume.

EXPORTATION OF HEMP.

Upward of two years ago we prophesied that if due attention were paid to the culture of hemp, and above all, preparing it for market, that the United States would leave off *importing* and soon become *exporters*. This prediction has already begun to be realized, several of our packet-ships which cleared for England last month having American dew and water-rotted hemp on board. If the article be liked upon trial, large orders from abroad will follow; and that it will be liked we entertain not a doubt, as American hemp is known to be stronger than the Russian, or indeed any other grown in a foreign country. This should stimulate the planters of Kentucky and Missouri to renewed exertions to properly prepare it for market; we are confident that this is all that is wanted to make it take precedence. It can also be grown as cheap here as in any other country whatever.

FARM OF MR. PELL.

This is one of the most interesting farms we have visited; and although it has been under the direct supervision of its owner but a short time, there is already a system established, and science displayed in its cultivation, that reflects high honor upon him, and which we would gladly see copied throughout the country. The farm contains about 300 acres, and is beautifully situated, directly on the Hudson river, in Pelham, Ulster county, 85 miles above New York. The soil is a sandy loam, with a sufficient intermixture of clay to give it consistency and retain manure. By Dr. Gardner's analysis, it contains a small quantity of gypsum and common salt, soluble in water; phosphate of lime, carbonate of lime, and silicate of potash, soluble in muriatic acid. Quarries of blue stone, of an excellent quality, are found upon the land, from which the material has been taken for fencing it round with a wall sunk two feet below the surface of the ground, and rising four and a half to five feet above it. This wall presents a handsome face on each side, and is laid up in the most substantial manner. It is three feet thick at the bottom, every other course in it being flat stones placed across the whole width for binders. Thus formed, it will settle equally, and probably stand a century, needing, during this time, very little repair. The gates opening to the road are of iron, high and strong, and hung to massive stone pillars on either side. Within the outer wall are few cross fences, and as Mr. Pell soils his stock in large yards, or a single enclosure of a few acres, it is his intention, eventually, to take up even these few, and thus give the whole farm a noble, open, park-like appearance. This will make a great annual saving in fence-building and repairs, which seems to be little considered, as yet, in the United States.

Rotation of Crops.—The farm is devoted principally to orcharding. All this part, after undergoing a thorough renovation, has been laid down to grass, in which it will be permanently kept. On the other part, the sod is broken up the first year and planted with corn; the second and third years it is devoted to roots; the fourth year, wheat, seeded with grass at the rate of one bushel of clover and half a bushel of timothy or orchard-grass seed to the acre. On some soils, so much grass-seed as this would unquestionably be unnecessary; but Mr. P. informed us, that when he seeded with the ordinary quantity he only cut *one* ton of hay per acre, whereas, by his method he obtained *three* tons. We well recollect, the first year of our own farming, adopting the advice of our neighbors as to the quantity of seed to be sown. Our grass was so thin the first year as not to be worth cutting; we therefore let it all go to seed, and then pressed it down flat on the ground by passing a heavy roller over it. The next year we had an abundant yield of hay; but had we used three times the quantity of seed first advised, we should have cut a large crop the first season, and not have lost the use of our land a whole year, and had it overrun with a host of weeds where there should have been grass.

In putting up his hay, Mr. P. uses the extraordinary quantity of one bushel of salt per ton. The advantages of such high salting are thus stated: 1st. It can be put up without injury in a much greener state than when less salted—sometimes within a few hours after cutting, and always the same day unless caught in a shower. The saving of time, therefore, in handling the grass in curing is considerable, in addition to lessening its exposure to rain. 2d. Thus highly salted, it will weigh much heavier when sold, probably at least one quarter, and it is calculated that this gain is more than equivalent to the cost of the salt, when cheap, at least five times over. 3d. It is preserved sweeter and greener than when cured in the ordinary method. We believe the greater the quantity of the natural juice or moisture of the grass that can be retained in the curing process, the more valuable the hay will be found; for this juice, if not the most substantial part of the fodder, is certainly the most palatable, as it sweetens the food of the stock, and makes it more agreeable to them; they consequently eat more, and thrive better upon it. In this opinion, we beg leave to add, that we are fully sustained by every intelligent farmer with whom we have conversed upon the subject, either in this country or in Europe. 4th. It brings a higher price than other hay in the New York market. 5th. Stock relish it as well as any other hay whatever, thrive uncommonly well on it, and ton for ton, it seems to go further with them; nor has it been noticed that they drink much more when fed on this than on hay scarcely salted at all. It is well known that persons living on salt meat drink very little more than when eating fresh. It must be recollected that hay put up so green has much more moisture in it than when drier; it can consequently absorb more salt; moreover, it is believed that the grass can only take up and dissolve a certain quantity of salt, however much may be put upon it. We know that this is the case with meat when pickled in barrels; it absorbing such quantity of salt only as is sufficient to preserve it, and whatever more has been added is left undissolved. We wish, however, to be understood, as neither recommending nor disapproving so much as one bushel of salt per ton to hay; all that we ask of our readers is, to settle the matter for themselves by carefully experimenting with four quarts per ton up to thirty-two; we shall then know which is best.

Mr. Pell has made many interesting experiments in growing different kinds of crops, the results of which, in several instances, have been quite astonishing. When more fully proved, we trust that we shall be allowed permission to communicate them to the public.

Orchards.—Mr. Pell has been remarkably successful in treating his orchards, getting a rapid growth of the trees, and at the same time making them bear now abundantly every season, instead of only every other year, as formerly. The details of this treatment we shall give hereafter. He has fatted hogs weighing 325 lbs., on sweet and sour apples, the sweet fed for a week then the sour a week, without any other food. The pork was sweeter, and apparently quite as firm as corn-fed of the best quality.

Manures.—Mr. Pell has made many experiments with different kinds of manures and composts, an account of which will be communicated to the public in due time. We here give a list of the principal materials for his composts: stable manure; dry charcoal dust; hickory wood soot; bone dust; oleaginous charcoal; oyster-shell lime; decayed leaves; leached ashes; unleached ashes; guano; sal soda; nitrate of potash; fine salt; poudrette; horn shavings; refuse sugar; ammoniacal liquor; blood; sulphuric acid; magnesia; plaster of Paris; plaster from walls, ground; decayed grass; decayed straw; decayed weeds; fish; refuse oil; sea weed.

Mr. P. took the analysis of vegetables, grain, grass, fruits, and wood, for his guide; he then compared them with the analysis of different substances, which he mixed up in the proportions required for the food of the crops to be cultivated. He has thus formed, in his laboratory, large heaps of highly valuable composts, the effects of which on different crops is quite astonishing, having quadrupled them, in several instances, at an additional cost of not over $3 to $5 per acre. He is an uncompromising advocate for lime and charcoal, especially the latter. By the free use of these he keeps the rust from the gooseberry, and diseases of pretty much all kinds from his fruit and crops, beside adding largely to their yield.

Stock.—Being so exclusively a fruit farm, we found no other stock here than is necessary for working the land, and giving milk for family use. The cows are grade Durhams, the bull a thoroughbred. The pigs are mostly Berkshire, and very fine.

Soiling.—Last year the cows here run upon very good pasture and averaged eight quarts of milk only per day. This year, by keeping the same lot up in the yard and soiling them with green food, they have averaged thus far within a fraction of sixteen quarts per day; thus showing that by being driven to and from pasture, walking about it in search of food, and the disturbance of flies, animals will not secrete as much milk as when kept up quietly with plenty of food, where they can have shade or sunshine as they please. A certain degree of exercise is doubtless necessary for health; but an undue amount is prejudicial to fatting of the animal or secreting milk. More manure is made for the farm when cattle are kept up and soiled than when left out to run upon pasture.

Fish Ponds.—It is a matter of surprise when fish ponds are so easily made and kept up, that our farmers do not pay more attention to them; as they could thus have, at a trifling expense, a supply of fresh fish all the year round, any time at a moment's warning. Mr. Pell has already four of these on his farm, and contemplates soon adding two others. They are made in the easiest and simplest possible manner, by merely deepening a hollow in a meadow, and conducting a spring or rivulet to it, or damming up a ravine. One of these ponds was stocked with pickerel; a second with trout and goldfish; while in another, the experiment is now making to *fresh-waterize* the shad. Last spring, 56 of these fine fish were caught with a seine in the Hudson, in front of the farm, and instantly placed in the pond. Herring, bass, white and yellow perch, sun, and other small fish, together with some large sturgeons, were added, to keep the shad company. When we were there, millions of young fish had been hatched out from the spawn, and all were doing well. We recommend these things to the earnest attention of the public. People would add great variety to their food by making fish ponds on their farms, wherever they could be formed at a moderate expense. Those residing near towns might realize a considerable income from these, in the sale of the fish, if they would pay proper attention to them.

Birds.—Here the birds are protected, and not a gun is allowed to be fired upon the premises, nor anything else permitted to disturb them. In consequence of this, they build their nests in the shrubbery near the mansion, and are so tame as to allow one sometimes to catch them with the hand. The beneficial result is, that they destroy millions of insects, which tends greatly to protect the crops. Besides, they cheer the residents by their presence, and delight them with their songs. It is true they now and then help themselves pretty bountifully to fruit; but what of that? Should they not be paid for their labors, and allowed a dessert after their insect repast? Mr. P. calculates to have fruit enough for himself and the birds too. We pity that person who has no sympathy for birds, and who is too churlish to protect them. When residing upon our own farm, the crows became so tame, in process of time, as to come in troops into our garden, and we never allowed them to be disturbed. They did no injury to the corn, or to anything else in it; but devoured thousands of the cut-worm, and other insects injurious to the crops. We do hope, if no other motive has weight with the farmers, that their own interests will ultimately prevail in causing them to protect the birds.

The Grounds.—A fine natural wood borders the estate along the river, and crowns the ascending bank. The grounds about the mansion are tastefully planted with various trees and shrubbery, which when more grown will present a handsome appearance. Among these, and leading through the belt of forest in various directions to the river, are winding gravel walks, with here and there upon their borders, in delightful keeping, the rustic chair, settee, and arbor, shaded by creeping vines or overarching trees. The deep ravines are crossed by handsome wire bridges. The lawn is carefully mowed every two or three weeks, and kept in the finest order. Around the house are groups of fragrant flowers, very prettily planted, and continually succeeding each other in variegated bloom.

The Garden.—This is quite ample, and situated some 20 rods from the house. A high brick wall is built up on the north side, which answers also for the back wall of the conservatory already stretching 200 feet along its length. Among other things here, Mr. P. has commenced the cultivation of the native grape under glass without heat. The size of the grape bunches are nearly doubled by this, and the fruit will ripen full 3 weeks earlier than in the open air. The stock of the vines come up inside of the conservatory, which is considered far preferable to being placed outside, and conducted through a hole in the wall, as the whole vine thus has the same temperature for a start and growth. There is no wall beneath the sill of the front part of the conservatory to obstruct the roots pushing into the garden soil. The whole garden is well stocked, and kept in the best manner by Mr. Cunningham. He also is the tasteful architect of the bridges, rustic work, and many other things in and about the premises, which do him great credit.

Buildings.—The mansion is situated near the centre of the estate, on ground gradually rising about 100 feet above the Hudson, and commands uncommonly varied and extensive views on both sides of the river, above and below, bounded on the north by the sublime range of the Catskill mountains, 40 miles distant. The house is of brick, painted white, and is 60 feet by 66, with a basement story and two upper ones, and a piazza in front. It is externally of the Roman order of architecture, strictly followed; and yet, it has a very cottage-like appearance. The style within is of the Grecian Ionic. In the centre is a hall paved with marble, 24 feet wide and 27 feet long, on the ceiling of which, similar to beautiful fresco, is a picture painted on canvass expressly for it, by the best Roman artists. The centre represents Guido's Aurora, four other groups equally celebrated, surround it, and the Arabesques are copied from Raphael's in the Vatican of Rome. It is needless for us to add that everything in the mansion is in keeping, and very elegantly and commodiously arranged. We know no reason why a gentleman in building should not gratify his taste, and make every reasonable arrangement for the comfort of his family. It costs but a trifle more in the first place, and is ever afterward satisfactory. No ugly appendages of wood-shed and other out houses are attached to Mr. Pell's mansion, to mar its architecture. Approach it on which side you will, it presents a handsome façade. We wonder no more attention is paid to this point in building. The greater number of country-houses are so miserably loaded with appendages and additions, that they give the man of refined taste disgust rather than pleasure in looking at them—they show a handsome front, and that is all. The basement story may contain all that is necessary in the smaller outbuildings; as for the larger ones, they should be placed some little distance from the mansion, and be screened by trees. The barn is built upon a gradually sloping hill. The loft runs the whole length, is appropriated to hay and grain, and is nearly on a level with the upper part of the ground. This makes it easy to pitch in from the carts. The lower story is divided into a piggery, cow-stable, cider-mill, carriage-house, horse-stable, and poultry-house. These open toward the south into ample yards for the stock, which are well supplied with water from springs, at all seasons of the year. The arrangements are comfortable and convenient, and the buildings were erected at a moderate cost. Near the barn is a workshop and root-cellar.

In going over the farm, one observes system and order in everything. The grounds also present a very clean appearance, scarce a weed being found among the crops. We were no less gratified than instructed in our visit here, and we hope the example of Mr. P. will be followed by others of the young men of our flourishing and happy republic.

WHEAT AND RYE.

September is the best month for sowing wheat and rye throughout the northern and middle States. If the soil be a cold one, or a stiff clay, the grain should be sown the first week of this month; if warm and dry, the second week is preferable; but on no account should sowing be delayed beyond the third week, as in that case the crop is sure to suffer greatly in consequence of it. To subsoil plow the land for winter grain would be highly beneficial, as it deepens the tilth, thus enabling the roots of the plants to strike deeper in the ground, and moreover, renders the crop much less likely to winter-kill. A most excellent subsoil plow from the manufactory of Messrs. Ruggles, Nourse & Mason, may be had for $6, and it is made so light as to require a single yoke of cattle only to work it.

Winter grain is best sown in drills about six inches apart, as it is thus more exposed to the sun; the air also circulates more freely through it, continually agitating the stalks, making it grow up hardier, and better enabling it to resist disease, more especially blight, mildew, and rust. The experiment has often been made between sowing in drills and broadcast, and if any one doubt the superiority of this method, let him try two crops side by side, one sown broadcast the other in drills. We regret that we do not know of a good drill machine in the United States which is made sufficiently cheap for general use. It is a great desideratum, and our ingenious mechanics would do well to turn their attention to making them. Next to sowing in drills we prefer ploughing in grain about two inches deep. For this purpose a three-share plough, sufficiently light to be drawn by a single yoke of cattle, has recently been constructed, which makes three furrows at a time. With some little improvements in it, this could be made to answer a good purpose, and is almost equal to drilling the grain; as thus plowed it comes up in pretty equal rows. The last method which we can recommend is, sowing broadcast upon the rough furrows, and then harrow. The ground should not be harrowed previous to sowing, as it makes it so smooth that it is almost impossible to even half cover the grain—at least, so we have always found it.

For further particulars regarding the culture of wheat, see Northern Calendar in this No., page 275.

INCREASE OF AGRICULTURAL EXPORTS.

It gives us great pleasure to say, that the agricultural exports from this port, especially to England, have been largely on the increase the past summer, and two almost entirely new products have been added latterly to them. These are corn and hay, which hitherto, from their great bulk, have been prevented going abroad to much extent.

Corn unground is quite in demand now in England, and if successful experiments are made there another year in sowing it broadcast for soiling, we are of opinion that a large and steady market will open for it. We think that the American minister at the Court of St. James' should be instructed to use his influence with the British government in this matter. Mr. Coleman is worthily exerting himself in the good cause there we see, during the progress of his agricultural tour.

In consequence of the almost unprecedented dry weather in England, not more than half a crop of hay has been made this season; grass is also quite short. The consequence is, that hay has risen enormously, and was worth, at our last advices, about $40 per ton. Freights across the Atlantic rule very low just now, and it can be exported at a fair profit. For the English market it should be of the best quality and pressed as compactly as possible.

VILLAS.

The observant traveller will have noticed, that a great change has been going on for the past few years in the northern and middle States, particularly in the neighborhood of cities, in the style of architecture of villas and country-houses. We are forsaking the Grecian and now taking to the Gothic; and so far as it gives variety, and in some instances is more comfortable and picturesque, this change is to be commended. There are certain circumstances, however, under which Gothic buildings are attempted, that make them appear absurd, and we trust that the fashion now set in erecting them will be followed with all due caution. A Gothic building of wood is perfectly ridiculous; it should invariably be of stone, with iron or bronze appendages, and any one attempting this style in less-enduring materials, will be certain to be laughed at by all persons who entertain a proper sense of the fitness of things. If wood or even brick are to be used, we would much prefer the plain house or cottage, with their piazza roofs and simple porticos; and after these, our taste inclines to the cottage ornée, partaking somewhat of the French style for a cottage; and the Italian, with the square tower in one corner, for a house of two stories. But why should we be for ever copying foreign things? And why will not our architects get up something *original*, combining comfort with true taste, and which would find favor as the American style of architecture? Never was a better field for the display of invention than in this great country, where tens of thousands of buildings are annually erected. We have often thought that an Omawhaw lodge, ornamented with pillars something like the stalks of Indian corn, with their leaves and tassels, might be made a very pretty model for a villa. The lodges and huts of other nations among the aborigines of this continent, and many of our plants, and trees, and flowers, may be made to contribute hints to the forming and adorning of our mansions. But some may say that all this has nothing to do with farming. If so, we beg leave respectfully to differ with them in opinion, and contend that it has.

Taymouth Castle.—Fig. 52

The above cut is a handsome illustration of the castellated Gothic. It is the residence of a Scotch Marquis, and stands at the east end of Loch Tay, near the village of Kenmore. A very pretty villa, constructed of Sing-Sing marble, has recently been erected near Tarrytown, on the east bank of the Hudson, which somewhat resembles Taymouth Castle. Of course, in length and breadth of mansion, and height of towers, it is not to be compared to the magnificent pile before us; and we trust that we shall never have such in this country, except as public buildings, or where associations are formed to erect whole squares in towns and cities, and give their fronts a *oneness* of appearance, instead of the helter-skelter, ugly, incongruous, misshapen fronts which now present themselves on all quarters throughout the United States. It is a pity that each city has not a *controlling* architect for such things, whose will were law. Every square then in our towns would appear like a handsome palace; and the yards in the interior be formed into a general one, prettily laid out, a fountain playing in it, and turfed, and planted with shrubs and flowers. But what are they now? Shocking nuisances generally—inimical to health, and such as the refined eye looks out upon with loathing and disgust. All these things might be remedied without its costing a farthing more. Future generations will wonder that their fathers could have thus lived. Indeed, a century, or perhaps even half a century hence, our present filthiness in this respect will be characterized as the disgusting appendages of barbarianism. We are sensible that there are many exceptions to the above remarks throughout the United States; we are speaking only of such things as strike the eye generally, and the sooner they can be reformed the better it will be for us, even in a pecuniary sense, to say nothing of the great improvement which would be made in health, morals, and refinement.

REMEDY FOR OVEREATING APPLES.

There is a great crop of apples this year, and since they are ascertained to be valuable food for stock, they are mostly used for this purpose. Unfortunately, horned animals are apt to get choked with them when fed whole; yet till a cheap machine, requiring not to exceed a single horse power to move it, can be invented for crushing them, the generality of farmers must continue to feed as at present. An apple lodging in the gullet is easily removed by a probang or common whip-stock thrust gently down the throat; but we have no recollection of seeing any remedy for sickness caused by overeating apples. A friend suggests to us, that a lump of saleratus equal in size to a hen's egg, dissolved in warm water, is an effectual cure. The remedy can do no harm if it does no good, saleratus being a very simple substance. Perhaps any soothing, purging medicine would be equally effectual.

By boiling apples, and feeding them out moderately, especially when mixed with bran or meal, no danger of any kind will ensue. Cooked fruit goes much further than the raw, for food, and where proper conveniences exist for boiling, it is recommended in an economic point of view. When it can not be conveniently cooked, we should much prefer giving it to hogs than cattle, as they may eat it freely with little or no danger.

GREAT SALE OF ELECTORAL SAXON SHEEP.

We desire to call particular attention to the advertisement in this No. of the executors of the estate of the late Mr. Grove, to the sale of his Saxon flocks, one of which is to take place at Buskirk's Bridge, N. Y., on the 30th September; and the other at Granger, Ohio, on the 15th October next. Mr. Grove was educated a shepherd among the Electoral flocks in Saxony, which are acknowledged by all to produce the finest wool in the world. From these flocks he personally selected, at various times and with great care, and imported into this country, the choicest sheep to be had among them. These he has continued to breed here in America, with a reputation which has added to, rather than detracted from their original highly meritorious qualities in Saxony. Let it be recollected that fine wool is now, and must for an indefinite period continue to be, *one of the most profitable* productions of the farm; that we have not only a large and greatly increasing demand for it in our own country, but the prospect of considerable sales at good prices abroad, as agents from foreign countries are now among us, with orders in hand for heavy purchases of the higher grades of wool.

The pedigree of Mr. Grove's flocks is unquestioned—this is a matter of the utmost importance to the purchaser—they are *pure, thoroughbred* sheep. These in hand, the wool-grower will have a fine sort with which to start, and be assured at least of one thing—undoubted purity of blood—a point of no trifling consideration, when we look around and see the miserable animals offered everywhere to be sold as pure Saxons, many of which are *mere grades* and poor sheep at that. A rare opportunity now presents itself to those desirous of obtaining fine wool sheep, to do so; and they may rest satisfied of one thing, and that is, at whatever prices they may purchase any of these superior animals, they can have an advance on them within a year, such will be the demand for a choice quality of wool and the rare animals necessary to produce it. We sincerely hope, for the benefit of our wool-growers throughout the country, that they will generally attend the sales of these high-bred, pure, Electoral Saxon flocks.

Agriculture in Scotland—No. 1.

We have much pleasure in presenting our readers with the first of a series of letters from our young friend Mr. Norton, who sailed hence to Liverpool last spring, with a view of availing himself of the instruction in analytical chemistry of Professor Johnstone of Scotland, and of becoming acquainted with European agriculture. We are confident that they will afford high gratification to our readers, and be perused by them with no less pleasure than profit.

Edinburgh, July 26, 1844.

Farm of Mr. Finnie.—In compliance with your kind invitation, and in the hope that I may contribute to the interest and usefulness of your paper, of which I have been an attentive reader, I will occasionally during my residence here send you a communication.

I visited a short time since, the farm of Mr. Finnie of Swanston, one of the most celebrated Lothian farmers, and was so much pleased that I will endeavor to communicate something of my impressions. Professor Johnstone's plan is to unite theory with practice, so that while engaged in chemical researches, we are led to consider their bearing upon the actual wants of the agricultural community; also, by conversation with the intelligent farmer, to have new subjects brought before us.

Situation.—Swanston is situated about three miles from Edinburgh, upon a northern slope of the Pentland hills, at an elevation of between 500 and 600 feet above the level of the sea.

Buildings and Stock.—The attention of our party was first turned to the farm buildings. These are of stone and form an extensive quadrangle. Here are stables for the horses, of which sixteen are employed upon the farm; also stalls for about twenty-five cows; but these are principally occupied by fattening cattle, as Mr. Finnie keeps merely enough cows to supply his own family. The horses are fed upon fodder, cut by one of them connected with the cutter, by a simple contrivance. There are appropriate shelters for carts and implements, convenient store-rooms, &c. In the centre is a small steam-engine of six-horse power, which drives the threshing apparatus in the outside building. The grain falls from the threshing machine directly into a fanning-mill, which separates the awns and light seeds; by a set of small iron buckets revolving upon a leather band, it is then raised and delivered into a second, and finally a third winnowing machine, from which it comes forth beautifully clean. Another set of deliverers take the chaff to the room above, where the unthreshed grain is first introduced, to pass once more through and thus prevent all loss. All of this machinery is worked by the engine, and much ingenuity is shown in dispensing with manual labor. The steam also cooks and steams the food for the stock. Mr. F. estimates its fuel to cost about £5 a year. A large walled space in the centre of the quadrangle is devoted to the reception of manure from the stables, piggeries, &c. The stock-yard still presents a goodly show of last year's products. The frames upon which the stacks stand are all numbered, to the amount of seventy-five. This must be very convenient, especially with crops, the results of experiment.

Division of Land and Course of Cropping.—Our attention was next occupied by the farm itself. It consists of 1200 acres—600 of arable and 600 of pasture land. The arable land is again divided into infield and outfield. The infield is long cultivated land, and capable of producing all kinds of crops; while the outfield is lighter, and more recently reclaimed, the soil being thin in many places. Upon the former a five, and on the latter a six years' rotation is followed. Upon the infield it is: 1. Potatoes; 2. Wheat; 3 and 4. Grass; 5. Oats. Upon the outfield, turneps are substituted for potatoes; barley and oats for wheat; and three instead of two years, grass.

The Crops.—These, the present year, are about 40 acres of wheat, 40 of potatoes, 200 of barley and oats, and 70 of turneps. The wheat gives promise of a good yield. It is sown broadcast, drilling having been given up, because the weeds upon those fields are *actually exterminated.* Of the potatoes, 20 acres are in one field. The superiority of those manured with guano was here most evident. Those, however, where a half manuring, or 20 loads of farm-yard dung and 300 lbs. of guano per (Scotch) acre were applied, looked better than those wholly manured by guano. I was struck with the beautiful accuracy of the potato drills. It was too early in the season to decide upon the yield of the oat and barley crops. The oat straw will be short, owing to the excessive drought of the early summer. The turneps were undergoing the first thinning and looked very well. The amount of this crop now raised is truly enormous. One dealer in Haddington, about twenty miles from Edinburgh, says that he has this year sold 50,000 lbs. of seed, intended to sow 18,000 acres.

All of these crops on this farm are the subject of varied experiments in application of almost all substances used as manure, in variable quantity and every imaginable way. One barley field is the subject of nearly thirty different applications of steeps. In another out field, are twenty-three kinds of top dressing. These are instances, and it would be useless for me now to enumerate more, as the results will undoubtedly be published. These experiments seem to be all conducted with great care and rigorous accuracy, vital requisites in such matters. If such varied researches are successfully carried out, Mr. Finnie, in taking upon himself the vast amount of attention and labor necessary, will confer a benefit not only upon himself, but upon the agricultural community, the importance of which can hardly be estimated.

The arable land of this farm, with but few exceptions, is thoroughly drained. Tiles are used and by putting them in of very large sizes, even the ditches are covered and the fields are cultivated close to the hedges and fences, saving land which elsewhere is a nursery for weeds. Those weeds which the plough and spade can not reach are picked out by hand, at from one to two pence per six lineal yards. All the vegetable matter thus obtained is formed into compost heaps and more than repays the expense of collecting.

The pasture land of the farm is chiefly upon the Pentland hills, and will sustain about 5000 sheep. Upon this, improvements are going on, by irrigation in some places and draining in others. Lime will probably be of much benefit, for although the farm lies upon a Zeolitic Trap, the decomposition of which affords a certain quantity of lime, yet there is not enough to maintain the proper supply necessary for the soil.

Manure.—Every possible means for the collection of manure is adopted. A portion of the grass land is let to some persons from Edinburgh, in order that they may keep a dairy of 24 cows thereon. Their manure carefully preserved, adds materially to the supply. In addition to this, and all the manure from his own stables and compost heaps, Mr. Finnie told me that he annually paid about £250 for manure from Edinburgh, giving from three to four pounds for the manure of a single cow. As much more is paid for the portable manures, such as guano, nitrate of soda, bone-dust, &c., making a total of about $2,500 per annum; this too by a *tenant farmer,* one who has his rent and a high one to pay. Nothing can be more conclusive as to the *profit* as well as the benefit of liberal manuring.

The Grounds.—Notwithstanding his numerous avocations, Mr. Finnie has not neglected the adorning of the grounds about his house. The hedges are at least 10 feet in height and beautifully trimmed; there is a pretty garden here also, and the house is surrounded by fine trees. The view of the Frith of Forth and of the city of Edinburgh from this place is beautiful. We left Swanston delighted and instructed by our visit, for we saw there a model of good order and progressive improvement; not that it is perfect, for many things are yet to be done; but there is everywhere visible the triumph of mind over matter—a combination of enterprise with prudence—of intelligence free from prejudice—of industry and skill.

JOHN P. NORTON.

PAULAR MERINO SHEEP.

A WRITER in the American Agriculturalist, over the signature of Examiner, has at intervals, for several months, published a series of violent attacks, on not only the sheep, but the motives, veracity, and character of various breeders of Merino sheep in our country. Indeed, I know of but *one* breeder of this variety, in relation to whose sheep much has been said or written of late, who has escaped these assaults.

I am charged by this writer with being "interested" in the statements which I have submitted to the public in relation to the sheep of Mr. S. W. Jewett, of Vermont; and I am particularly charged with publishing in the January No. of the Cultivator "an elaborate defence and puff of these sheep—a disguised ram advertisement, headed, as usual, with a decoy or catch-picture." I confess I deem it a degrading necessity to feel myself driven to answer the personal assaults of an anonymous writer; and nothing but the tacit or partial sanction (*a*) of these assaults on the part of the editor of a respectable agricultural journal, which the public, or some portion of it, *may* be disposed to infer from his continued publication of them, has forced me to adopt an alternative so humiliating.

I do not propose to bandy criminations or recriminations with an anonymous writer. I shall content myself, mainly, with explaining those facts and circumstances out of which this writer has formed materials for his assertions against me. The first year I acted as corresponding secretary of the New York State Agricultural Society, I invited Mr. Jewett, in common with various other breeders of sheep of every variety, to express his views and the results of his experience in relation to sheep-breeding, for our Volume of Transactions. I had never met Mr. J., but extended this invitation on the recommendation of those whom I supposed best qualified to judge, as well as that common fame, which assigned him a high, if not the first place, as a breeder of Merinos, in the United States. In his part of the correspondence which ensued between us, there was certainly nothing to change the favorable impressions which I had imbibed towards him. I subsequently met him. His appearance was that of a gentleman. He was a candidate for a high and responsible office in the State in which he resided. On him, so far as my knowledge had extended, the breath of suspicion had never blown.

I had come to the conclusion to breed Merinos. After diligent inquiry in relation to the weight and quality of fleeces of the most celebrated flocks in our country, I came to the undoubting conclusion, that for a union of these properties, the sheep of Mr. Jewett excelled those of any other breeder. Their pedigrees as *pure bred Merinos* were traced by him, to my full satisfaction, from imported flocks. Further than this I went not and cared not.* Anxious to improve my flock with these sheep, I ordered a small number, and gave a *carte blanche* for the price. I received but two, and actually owned just *two*, and no more, (and had not, at that time, the most remote expectation of owning more,) when Examiner taunted me with being an "interested puffer" of Mr. J's sheep—"issuing disguised ram advertisements," &c.! I will further say, if the assertion can be considered necessary, that I have not now, and never have had, any interest or connection with Mr. J., directly or indirectly, in the disposal of his sheep.

A word in relation to my communication in the January number of the Cultivator, stigmatized as a "disguised ram advertisement." It was distinctly stated *in the communication itself*, that it was drawn forth by the direct request of the editor of the Cultivator, to *me* directed, asking me to write what I knew of Paulars in general—Fortune's (Mr. Jewett's buck) character, pretensions, and progeny in particular." I *might* have added, in relation to the "decoy picture," that the editor of the Cultivator further stated to me, that he had a portrait of "Fortune" which would appear at the head of my communication. I had no agency in procuring that picture, and do not know that any other person had, beside the editor of the Cultivator. On two other occasions, be it known unto Examiner, have I published statements in relation to Mr. J's sheep, or in relation to my sheep purchased of Mr. J. The first which appeared previously to the article in the Cultivator, was to correct an erroneous statement made in relation to the weight of their fleeces by the editor of the Genesee Farmer; the second appeared in a description of the Cortland county fair, where these sheep were competitors, which description was prepared at the request of the editor of the Central New York Farmer, and was published by him. I am desirous that Examiner, and all others interested shall know the full length and breadth of my "advertising" propensities and practices.

If commendatory notices of varieties, breeds, or animals possessed by the writer, be proof that the writer is "interested"—is "issuing disguised advertisements," all I have to say is, that many distinguished gentlemen throughout the country have for years thus "grievously offended," and none more so than A. B. Allen. (*b*) They have "advertised" where thousands of dollars were involved, instead of the paltry price of *two* sheep and their produce! To this day, Mr. Editor, I, and doubtless thousands of others, entertain glowing and gratified recollections of your graphic descriptions of Bellfounder horses; Durham and Devon cattle, and their crosses; Tuscarora, Berkshire, and China hogs, &c., &c., &c.; and Examiner has but to turn back the pages of the Cultivator to the notable era, if I recollect aright, of 1836, (*c*) to find its pages almost *bristling* into life with the "counterfeit presentment" of pigs of as many hues as the "pretty little horses" in the nursery song—

---

* Examiner, after insinuating that Mr. J's sheep are "mongrels," "crossed with English sheep," &c., would now escape by narrowing down the issue to the single frivolous point whether they are or are not "Paular" Merinos! As I stated in my article in the January Cultivator, I consider this a question of no consequence, and have paid no attention to it in the investigation of their pedigrees. I spoke of Fortune as a "Paular," because his owner so calls him, and because he was so called by the editor of the Cultivator in his request for a description of him, quoted subsequently in the above communication.

"The black and the bay,
The white and the gray," &c.

Would he aver that these were "decoy pictures?"

The individual who has been so fortunate as to escape the attacks of Examiner, is Mr. D. C. Collins, of Hartford, Conn. The most decided commendations of his sheep—even with a *picture*—have appeared in the American Agriculturalist, and in another publication issued from the same office and under the same auspices (the American Agriculturalist Almanac); these strong commendations have been coupled with a favorable notice of,(*d*) and call of attention to the first number of Examiner's series of attacks on other American breeders. No one, perhaps, has a right to infer from these facts that Mr. Collins has had any agency or priority, either in these praises of his own sheep, or in these attacks on those of others. I presume to draw no inferences in the premises. But at all events, a comparison has thus been instituted between his sheep and those of the breeders thus assaulted—a comparison highly derogatory to the pretensions of the latter.

Henry S. Randall.

Cortland Village, Aug, 5, 1844.

(*a*) We distinctly and emphatically disavowed endorsing all the opinions of Examiner (see vol. ii., p. 341); and we do not exactly understand what inference Mr. Randall would draw from his charge of a "tacit or partial sanction." It would be much better for him to define our exact position, otherwise it might be inferred that we wrote what never came from our pen. This rule of "inferences" might be made to work both ways, and be drawn out to sanction Mr. R's communication and all others of our correspondents, with as much propriety as those of Examiner.

(*b*) For our own part, we beg leave to say, that, thus far, there is a trifling difference between ourselves and Mr. Randall. According to our best recollections, when we wrote about stock, we usually made distinctions between thoroughbred and grade animals, or gave pedigrees, or all the information we knew of their history and breeding; and had anything like such charges been preferred against the breeding of the animals about which we wrote, as are made by Examiner against Mr. Jewett's sheep, we should feel bound as an honorable man to promptly disprove them, or make a public acknowledgment that we were mistaken, or had been imposed upon; neither of which Mr. R. here attempts, though, perhaps, he or Mr. Jewett *will do so hereafter*. There is a looseness in speaking and writing about *grade* animals throughout the country, which the sooner it can be corrected, the better it will be for stock breeders and purchasers; and every day's additional experience only goes to convince us more and more of the importance of distinguishing animals as grades or thoroughbreds.

(*c*) It was in January, 1840, not '36, as Mr. R. has it, that Black Warrior, Seneca Chief, Landpike, and Alligator, accompanied by a pair of fair demoiselles, like the Amazons of old, made their "bristling" entrance into "life," to the amazement of all grunters in general, and some in particular throughout the nation.

(*d*) We deny this in toto, and challenge Mr. R. to construe one word of our preliminary remarks to Examiner's "first number" as a "favorable notice." We only said that the "communication comes from one of much personal experience in sheep-breeding"—which is a fact; and merely added, the subject "seems important"—which is another fact. Neither did we "couple" the above "favorable notice" with "strong commendations" of Mr. Collins' sheep, inasmuch as the articles on that subject did not appear till two months after—we had not then even *seen* the sheep in question! We have had occasion more than once to correct misstatements in regard to what we say, and we think a little more caution on this subject should be observed. But as we do not intend to crawl out of any hole, or refuse to stand up to the rack upon any matter we ever wrote about, we suppose Mr. Randall may allude to a note under the article, "Fine Wool Sheep," page 98, of our second volume. If so, he might with as much propriety say that the late Mr. Grove's sheep were "coupled" with Examiner, as that Mr. Collins' were; and to conclude, it may be proper to observe here, that we literally forced ourselves upon Mr. C.; and that it was with the greatest reluctance he at length permitted anything to be written of his flock; and moreover, that he would not allow us to say all that we might with perfect truth and justice have said in regard to them. For example, a yearling ewe sheared a fleece of 10 lbs.—yes, TEN pounds—which was worth, at least, ten cents per pound more than any other Merino wool in market; and one of the most extensive wool-brokers in this city informed us it would bring it. Several other ewes and some of the young bucks nearly approached this weight. We honestly believe that Mr. Collins' importation from the Rambouillet flock of Merinos, in France, was one of the most valuable ever made into this country, and of great national importance; and we, and our late associate in the conduct of this periodical, beg to be considered as the persons "grievously offending" in all cases throughout, in the "favorable notices" and "strong commendations" of the Rambouillet Merinos.

EGYPTIAN CORN.

The Egyptian corn from the seed you sent me has fully matured, and is an abundant yield. It was planted late, and from its early maturity, I am led to believe that we might obtain *two*, if not *three* crops by the 1st of October. Mine was planted to obtain seed only. Where it was planted thick, each stock produced but one panicle, which is terminal; at a greater distance, and similar soil, some stocks have five panicles—one terminal, the other four auxiliary. Some put up suckers which have also borne fruit.

Robert W. Williams.

Tallahassee, Flor., *30th July*, 1844.

We hope that Mr. Williams will hereafter give us the product per acre of the above corn, and its value for stock feed, of both seed and stalk. It is now cultivated here pretty extensively.

CULTURE OF TOBACCO.—NO. IV.

The third indication is to secure a sufficient amount of ammonia to develop the tobacco plants.

In this paper I have been studious to recommend nothing to the planter except what is within his reach, save, indeed, lime, which may be in part replaced by burnt clay, a substance usually abundant where shell marl or lime is absent. I shall not, therefore, recommend the planter to send after ammoniacal manures, which are sold at a high price, and may be difficult of attainment. But turning his attention to the preservation of all the urine and fæces of his household, as well as of his stock; to the collection of woollen rags, the refuse of shearings, bristles, old leather, hats, feathers, dead animals, horns of cattle, bones, blood, waste soap-water from washings, refuse of soap making, kitchen garbage, &c., assure him, that upon an ordinary plantation, these for the most part forgotten articles, will yield enough nitrogen for a larger crop of tobacco, than his force can raise and cure. Let him reduce the solids of this long list of offal by cutting and crushing them into small pieces. Let him mix it with fine garden mould and the scrapings of the floor of his tobacco barns, and make nitre heaps of the whole, freely exposed to the air, but sheltered from rain; let him incorporate lime with these beds, and moisten them with waste soap water and urine, and at the end of two years from the commencement of the practice, by putting up new beds as fast as he obtains enough materials, the planter will not only be in possession of nitre, but each bed will yield him a mass of manure of incalculable value in the culture of tobacco. A half pint put to each hill twice during its growth, will yield him the most luxuriant harvest at *no expense*, for the trouble of collecting is not much greater than throwing away rubbish. A load will supply at least an acre, and he will have the satisfaction of knowing that his liberality in expenditures for his household in clothing and food, is attended with an increase of crop that will leave a surplus in return. When in Virginia, I urged the formation of nitre beds upon many friends, but to no purpose; I trust that the present desire, and *necessity* for improvement, will induce some of the intelligent and noble planters of that country to commence the practice, as well as the burning of clay, both of which I shall be proud to introduce into their country. Old tobacco barns, or temporary slab sheds at their sides, are admirably suited for nitre beds, if care be taken that no water drains out from the heap into the soil, as that would lead to heavy loss.

I have entered into this long account of the means of collecting nitrogen at home, because it is lamentable to witness so much waste, and disgusting to see the manner in which the above garbage hangs around the tenements of negroes. The practice would increase their comfort, and add to the appearance of the plantation, irrespective of the gold falling to the farmer. But it is not the only means by which nitrogen may be secured on the land. If the highest state of porosity is attainable, no more will be wanted for the production of rich plants. This condition, I do not, however, suppose to be practicable in our coarse tillage. Moreover, ammoniacal manures are of great value to all the cerealia. The common stable manure economically managed will be used for this purpose.

There is another grand means of obtaining nitrogen on the farm—*the cultivation of those plants which, requiring little or none from the soil, supply themselves by drawing largely from the air.* This practice is one of the pillars of agriculture; like liming, and burning clay, it originated with practical men, and as the result of experience. But by regarding it in a scientific point of view, it will be fully appreciated. We are indebted to that profound chemist and splendid agriculturist, Boussingault, for all that is known in this explanation.

He raised *clover*, from seed, in a soil utterly destitute of organic matter, and found at the end of two months, that it had abstracted from the atmosphere and fixed in its structure 10 per cent. more nitrogen than the seed contained. In another experiment, with clover transplanted from the field into a soil of calcined sand, there was an increase of 70 per cent. of that element, drawn from the air in the same time. Common field peas grown from seed in the same soil, also obtained in 99 days nearly 120 per cent. of nitrogen, above the quantity in the grain.

On the other hand, Boussingault sowed wheat under the foregoing circumstances, and at the end of two months there was a loss of 9 per cent. of the nitrogen the grain had contained. Fine transplanted oat seedlings showed a slight loss, even when growing in water.

By the cultivation of clover, beans, *grasses*, *Jerusalem artichoke*, &c., provided they are fallowed in full growth, immediately before flowering, any amount of ammoniacal substances can be concentrated in the soil. I wish to draw attention especially to the Jerusalem artichoke (*Helianthus tuberosos*), because it contains much nitrate of potash and ammonia, will grow upon stiff clay, and yields a great quantity of substance. This practice is one of the most surprising to those who have never resorted to it, and one of the best scientific experiments in agriculture. A sprinkling of powdered plaster of Paris will forward clover on poor soils.

In this discursive essay, written at intervals of leisure from more pressing business, there is much which will receive criticism. On one point I may forestall the farmer. It will strike him that there are some substances, as clover, recommended for the accomplishment of each of the indications laid down, and therefore should meet them all. This is true, clover meets all the indications, under some circumstances, and it is within my experience to have witnessed a case where a field that would scarcely grow ten bushels of oats to the acre, did produce upward of 1,000 lbs. of tobacco in three years after, by fallowing a second year's growth of clover. But I have not confined myself to recommending clover only, because its cultivation is not always successful at first; there are tracts of country where it commands so high a price that in the contracted economy of new improvers of land, it would be considered too expensive, and clover does not always answer even where it takes pretty well. In the same way, a perfect burning of clay will answer sometimes by itself, but I prefer to adduce it as a means of rendering soluble saline matters, for this I know it will always effect.

The remarks made in this, and the foregoing papers, will, I trust, be of importance to some planters; they are intentionally made applicable to all: there are, however, cases which they will not meet; for should there be a want of any essential saline matter, as bone-earth, lime, potash, sulphuric acid, &c., in the soil, the means laid down are not sufficient. In this case, which is not to be anticipated, except in barren sand, or on those fields which have been known to be severely cropped from the times of the first settlement, other appliances are wanting; manures from without the farm, suited to the soil, must be imported, and much expense incurred. On this topic I have not time now to write; but if my attention, now fixed on the establishment of an agricultural school in the University of New York, should be relieved sufficiently for another communication on the subject, it will afford me pleasure to point out such indications in the soil, as will furnish the farmer with the means of detecting the nature of the absent saline matter, and the cheapest plan for its restitution. In conclusion, and that the matter of these essays may be placed in a clear light, I will recapitulate the argument, and general heads.

1st. Plants differ in requiring a supply of nitrogen (as ammonia, &c.) from the soil, as well as the atmosphere; clover, grass, &c., obtain enough from the air for ordinary growth; wheat, tobacco, &c., require an additional quantity to be supplied them.

2d. New lands containing much vegetable matter, and under proper drainage, yield ammonia, &c., to the roots of plants, and therefore have all the indications of fertility; but the same lands after a time become barren by the loss of the organic matters.

3d. When the vegetable matter disappears, and the field lies waste, a sufficient quantity of the insoluble saline matters (bone-earth, carbonate of lime and magnesia, silicate of potash and soda) are not rendered soluble in the course of a season, to supply the necessities of luxuriant herbage.

4th. Tobacco requires a large quantity of these saline matters, and by uncovering the soil, leads to a considerable waste of its organic ingredients.

5th. The indications for the restoration of such barren soils, when recently cleared, are threefold:

1. To pulverize the soil so that it may become porous.

2. To hasten the solubility of its saline constituents.

3. To secure a supply of ammonia.

The means of accomplishing these indications are:

1st. By mechanical contrivances; by adding vegetable matters, as peat, muck, leaves, fallow crops, spreading charcoal, burning clay, and liming.

2d. To hasten the solubility of saline matters. By liming, burning the surface soil with lime, burning clay, the addition of vegetable matters, fallow crops.

3d. To secure a supply of ammonia. By attention to the stable, by preserving offal, making nitre beds, turning in fallow crops, especially such as draw all their nitrogen from the air, as clover, Jerusalem artichoke, &c.

D. P. GARDNER, M. D.
Lecturer on Agricultural Chemistry.
New York, June, 1844.

WOOL FOR EUROPE.—We are informed that agents of several French and English houses are now in this country, examining the clips of our finest flocks of sheep, with a view of purchasing them up for the European manufacturers of superfine broadcloths. This is an important movement, and shows the farmer that a superior quality of wool will not want a market, grow it as fast as we will.

IN publishing the following communication from Mr. Cook, it is proper in us to remark, that although the article by Americus of which he complains, did not appear till our May No. was issued, more than two months after the death of Mr. Grove, that it was actually written and sent to us at the time of its date, which was several days previous to this melancholy event. Furthermore, that we did not ourselves learn of the demise of Mr. G. till the last of March, when according to our best recollection, the article of Americus was in type; although from some circumstance which we cannot now recall, it was laid over till May, instead of appearing in March, or April, as it more properly should have done. Americus did not hear of the death of Mr. G. till some time later than ourselves; we believe not till the reception by him of our April No., containing his obituary notice. We know the writer of the article complained of, as a man of fine sensibilities, and high moral worth, and he will learn with deep regret that he ever wrote a line which has caused pain to a "helpless family;" and, certainly, had we supposed a single word in that article would have done so, we should have recalled it, even after being in type. Of our own respect and admiration of Mr. Grove as a man, and of his choice, pure bred flock of Electoral Saxons, the volumes of this periodical bear frequent and ample testimony, and it is unnecessary for us to add another word on this point. There is this consolation, however, in the matter, it has given Mr. Cook an opportunity of making an able argument in the defence of these fine sheep, and he has certainly demonstrably proved them animals of high value. Upon reading his article, we are sure that the public will agree with us in this, that whatever the loss sustained in their kind shepherd, the flocks are not wanting in an eloquent defender; and that all these remarks will tend to call public attention to them more pointedly than if they had never been made, and in this way their merits will become more known, and a greater anxiety manifested to obtain the animals in question.

ELECTORAL SAXON SHEEP.

The friends of the late H. D. Grove, have read with much surprise and regret, the remarks on his valuable flocks of "Electoral Saxon Sheep," in the May No. of the present volume of the American Agriculturist, over the signature of *Americus*. The cause of this surprise was not, that a writer should express a partiality in favor of the animal in which a portion of his property might be invested, and when comparing it with other varieties of the same animal, rivals perhaps for the public favor, that he should draw conclusions favorable to his own kind, and adverse to all others; all of which being perfectly consistent with every day's observation, might have been expected. But it arose from circumstances peculiar to this case. Mr. Grove slept in a recent grave; his more intimate friends had just taken hold to assist his bereaved, and at the time, in a great measure, helpless family, in the settlement of his estate; a large proportion of his property was in Saxon sheep, and these were advertised for sale; and yet, in the very No. of the periodical in which this advertisement appeared, an anonymous correspondent makes an attack not only on this variety of sheep, but upon the very flock by name thus advertised. This was a thrust that no one could anticipate; and as those who were the most deeply interested, possessed but an imperfect knowledge of this department of agriculture, no one was prepared to ward it off. Had Mr. Grove been alive, his ready pen would probably have come to the contest, fully capable of defending his favorite Saxons; yet that pen was now forever silenced, and they have been left to the discrimination of an enlightened public, for an appreciation of their valuable qualities.

Americus exhibits great tact through his whole article, and especially in that part more directly under consideration. In his general remarks he says, that the Merinos are "undoubtedly the most valuable and profitable race of sheep for wool-growing purposes, which this country or the world has ever seen;" and having made this broad assertion, without even an attempted shadow of proof, he proceeds to compare the Saxons, and especially the flock of Mr. Grove, with this most indefinite standard of excellence. A seasonable proportion of flattery introduces this part of the subject: "Mr. Grove, an occasional correspondent of yours, whose contributions to your pages I wish could be more frequent." "He is a man of *worth*, as well as of intelligence, and his *merit* is only surpassed by his *modesty*." But his sheep, though "of distinguished excellence, and believed to possess very strong and unquestioned claims to purity of blood," are but "delicate and beautiful hot-house plants." "Mr. Grove is a thorough Saxon shepherd," and "of this I need give no better *evidence* than his *perfect success* in raising" these animals, which "though so difficult a task in the hands of most *other* persons who have tried it in this country," he "finds in it nothing impossible or difficult. In *his* hands the Saxons *live* and thrive as well as the hardy Merinos do in mine;" all of which, when analyzed, means nothing more nor less, than that Mr. Grove has a most valuable flock of pure blood Saxons, which, from the fineness and "admirable felting qualities" of their wool, are becoming great favorites with the public, and consequently very much in the way of *Americus'* Merinos.

The question, notwithstanding Americus' most unqualified assertion, remains yet undecided, what in reality constitutes "the most valuable and profitable race of sheep for wool-growing purposes." It is a question of immense importance, subject to the influence of a variety of circumstances, easily answered in general terms; yet extremely difficult, when brought to the test of a practical solution. It depends not only upon the facility of raising and keeping the animals, but also upon the demand in market for the particular staple thus produced. We need coarse wools—we need fine wools—and we need a middling quality; and all of these varieties are equally necessary to supply the wants of the country and the demands of the market. Now as we cannot grow the fine wools on the South-Downs or Bakewells, nor the coarse wools on the Saxons, nor anything but a middling quality on the Merinos; each of these varieties of animal, become necessary to fill up its proper space in the wants of society; and the prosperity of the wool-growing community depends much upon the maintenance of a due proportion between the quantity produced of each of these qualities of staple, and the demand for it in the market—and, consequently, if an oversupply of either be produced, it must necessarily depreciate temporarily in value.*

Another idea, and one to which *Americus* takes particular pains to call the attention of wool-growers, is the delicateness and tenderness of the Saxon sheep, and he compares them with great gusto with what he considers the more hardy Merinos. This prejudice (for I think with regard to the pure blood Electoral Saxon, it is only a prejudice), has become somewhat extensive, arising from the fact, that during the first two or three years of the speculating mania in Saxon sheep, say from 1824 to 1827, large numbers of "miserable counterfeits" were introduced into the country under the name of *open* woolled animals, with their scant 2 lb.

---

* To show that the market is not overstocked at present with Saxon wool, especially with Mr. Grove's kind of Saxon, I herewith present the bill of the sale of this wool this season.

Middlesex Co. Bought of the Administrators of the estate of the late H. D. Grove. Lowell August 7, 1844.

Hoosic Flock	93	lbs. wool	*a* 85	cts. pr. lb.
	139	“ “	*a* 70	“ “ “
	252	“ “	*a* 62	“ “ “
	76	“ “	*a* 50	“ “ “
Ohio Flock	63	lbs. wool	*a* 85	cts. pr. lb.
	222	“ “	*a* 70	“ “ “
	286	“ “	*a* 62	“ “ “
	137½	“ “	*a* 60	“ “ “
	121	“ “	*a* 50	“ “ “

fleeces, scarcely enough to hide their nakedness; yet from these, whose ill adaptedness to our climate is evident in their light fleeces, has arisen this general feeling, constituting an excellent string for Americus, and one which he has not failed to pull upon. But the writer, who has been intimately acquainted with Mr. Grove and his flocks during the last fourteen years, can assure Americus and the public, that his sheep are really, entirely different animals, and truly "ought not to be associated in idea with the miserable riff raff of the country, passing under the general name of Saxons." (*a*)

But Americus is entirely in error when he supposes that the Saxons (I mean the *real* animal), are more liable to disease than other varieties of sheep, and especially the Merinos; and that such great skill and rare attainments are necessary in order, with them, to "snuff disease" while it is yet afar off, and thus by timely care and the use of proper means, *avert* the trouble and danger while it can be *successfully* dealt with, which is usually before it would *attract* the *attention* of common observers;" and as an evidence that such is the fact, the writer would observe, that notwithstanding Mr. Grove was suddenly and unexpectedly taken away at a most critical season for his home flock (20th Feb.), leaving everything in confusion, but one died from wintering. Yet all animals that herd are liable to epidemics, and often to very fatal and sweeping ones, no matter how hardy or how well cared for; and the causes that produce these visitations have not yet unveiled their secret sources to the penetrating eye of human science. To such devastating influences, sheep—Merino and Saxon—are alike subject, and every variety share and share alike; and the writer has too frequently heard of the unfortunate condition, many years since of a very distinguished flock of Americus' favorite Merinos, in a neighbouring town* to believe that they are exceptions to this general rule. True, the Saxons may require a better shelter in order to live, and just live through our winter storms, than the Merinos; yet there is a natural cause for this other than a more hardy constitution, and not very favorable to the fleece of the latter animal, while at the same time both will do better, at much less expense of feed, when properly sheltered, a fact well known to every practical wool-grower, as well as to the man of science. The reason that Merinos can withstand our hard storms better than the Saxons, is not probably found in their possessing any more hardy constitutions; but in the circumstance that a secretion of the skin, or some of its glands, gathers from the surface into the wool, and so glues it up as to render it impervious to water. This substance gathering in the wool, serves as a bed for dirt of every kind, and hence when we hear of the heavy Merino fleeces from this or that flock, we must calculate that they consist of "*gum, yolk, dirt*, and other substances," and from 45 to 60 per cent. only of wool. This substance, while it serves in some degree as a natural shelter for the animal, so far depreciates the value of the fleece, as in the end to be much more expensive than the artificial shelter required by the Saxons.

The Saxons belonging to the estate of Mr. Grove have been bred with great care, and from the best quality of this celebrated stock of sheep; and while from long and careful management they have become perfectly acclimated, they have, by his uniformly selecting the most perfect animals for increasing his stock, even improved during the operation; till they can boast, not only of being unsurpassed by any flock in the country, for purity of blood and fineness of staple, but of being unequalled by any other of the same quality of wool, in beauty of form and average weight of fleece. How then stands the question between the "Electoral Saxons," and Americus' Merinos? He acknowledges that "the Saxons live and thrive in" Mr. Grove's hands as well as the hardy Merinos do in his own; and the writer of this article knows, that many flocks of more or less purity of blood, *live* and thrive, perhaps equally well in the hands of many others in this vicinity. The Saxons are kept on much less food—afford nearly as high an average weight of fleece—of much finer staple—and commanding a higher price in market—require an artificial shelter, which in reality costs much less than the natural one depreciates the value of the fleece of the Merinos—are no more subject to disease than the latter, and are calculated to supply an equally necessary space in the wants of society—all of which considerations give them a rank much in front of the Merinos.

The noble flocks of our late friend, however, can no longer be kept together, and in a few weeks more are destined to be scattered to the four winds; and when I look about this region of country, and see how much the wool-growing stock has been improved; and when I hear almost every one, now that envy is silenced in the grave, frankly give the credit of this improvement to them, and the influence that their able management has shed around them, I cannot but look upon their scattering under these circumstances—the breaking up of these pure fountains for the nations improvement—as a public calamity.

S. A. Cook.

Buskirks Bridge, Aug. 16, 1844.

(*a*) We are much obliged to Mr. C. for quoting from some remarks of ours (see Vol. II. page 341), where we expressed a decided wish that Mr. Grove would no longer allow his sheep to pass under the general name of Saxons, since it had been so basely misused in this country; but would hereafter distinguish his flocks by the name which justly belonged to them—"Electoral Saxons."

PAULAR MERINOS—NO 6.

In my last, I made sundry enquiries of Mr. Jewett, to all which I hope he will soon see fit to favor your readers with *simple* and *direct* replies. In order to encourage him, by a good example, to answer civil questions, I will now endeavor to respond to some of *his* inquiries. He asks me, in regard to the *throatiness* of the Paulars, whether or no *all* of them have an equal development of that peculiarity. I presume not. You rarely find two animals or things exactly alike. I merely spoke of it as being a *general* characteristic of the family. He also wants I should explain about some spots or *marks* on his sheep, which he says they usually bear, small spots of a "sandy" (or brownish yellow?) color, about the legs, face, &c. I would here premise, that I am no astrologer, or "wise man of the east," nor at all gifted in deciphering "*spots*," or interpreting the meaning of "ring-streaked and speckled" peculiarities in sheep. He doubtless knows quite as much about such things as I do, and perhaps more. I never heard of a race of Merino sheep in which such spots were esteemed a good sign, or a *desirable* peculiarity; still less should I consider them as a distinguishing mark of the *Paular* branch of the Merino family. But, for Mr. J's comfort, I would say, that if he is satisfied his sheep are good, he had better not worry or trouble himself about their "spots" or "marks." I know of but *one* race of sheep common in this country, which are usually apt to have spots, and often of a yellowish brown or mulatto color, on their legs and faces. I mean of course, those fine English mutton sheep, the South Downs. Now although I am not, as I said before, "a wise man of the east," yet being a *Yankee*, by birthright, I suppose I might hazard a *guess* or conjecture, which is freely at the service of Mr. Jewett if it will be of any benefit to him. Is it not *possible* that those spots and marks may throw some light on the *origin* of his sheep? If they are, as many persons now consider them to be, *mongrels*, may not the spots be *indications* of the *cross* or mixture of blood, more or less remote, either with the South Down or some other sort of large English mutton sheep, which would account very naturally for the present *form* of his sheep, which he describes as being so handsome and perfect in the *body*, as well as for their being "good for mutton," as described by Mr. Chapman of Middlebury, in my quotation from the Transactions of the N. Y. State Society. It would also explain the *peculiar harshness* and *bad quality* of the wool of his buck Pedro, or No. 1, (the one he bought of Mr. Hull,) which I originally spoke of as closely resembling South Down wool, it being such as probably never grew on a *pure Merino* sheep, since the world was made. However, in view of everything, it is my own impression and belief, that the mixture of blood in the spurious or Wallingford Paulars, was made long since, with the old native mutton sheep of the country, which it is well known, were of English blood unimproved, and the mixture of which with Merino, would account naturally for the present form and large size of the sheep, as well as for the character and quality of the wool. I can afford no further light in regard to the "spots" and "marks" on Mr. Jewett's sheep.

---

* The flock of Merinos in Pittstown, Rens. Co. belonging to the late Cadwalader Colden, Esq., where hundreds of these valuable animals were swept off in a single season.

If he wishes to pursue the subject further, he might probably derive useful aid in the investigation, by calling in counsel, his intimate friend and coadjutor, Mr. Randall, the "able corresponding secretary" of the New York State Agricultural Society, who I believe has formerly recommended to the owners of fine flocks, the use of South Down bucks, as an advantageous mixture of blood; though in truth, a more pernicious one for growers of fine wool, could not possibly be devised, as myself, and many others, have long since learned, to our own cost, by experience. Mr. Jewett's friend Randall, is understood to be still pursuing his experiments in mixing with South Down blood; but how *he* succeeds in that "practical amalgamation" of white with black, (or to speak strictly, a white-faced sheep with a black or brown-faced one, dark or brown faces and legs being a peculiar mark of the beautiful formed South Downs,) we are not informed. If his flock is small, and composed of sheep of no great value, whose blood he does not mind spoiling, and his object is mutton and amusement for himself, without caring for *quality* of *wool*, then it will do, and on a small scale can do no great harm, unless in misleading others (owners of Saxon Merino flocks) by his example. His continued dabbling in the mixture of South Down blood, which he has certainly a perfect right to do as much and as long as he likes, shows, however, the *sincerity* of his advice to others, and his own willingness to take the miserable medicine which he is understood to have prescribed or suggested to others, as a remedy and "restorer of constitution" in their flocks, failing and drooping under the baneful and almost ruinous effects of the cross of *Saxon* blood. Perhaps, however, Mr. Randall, by fraternizing with Mr. Jewett in the investigation of his "spots and marks," may find in some of Mr. J's sheep (the spurious Paular for instance,) the South Down mixture, or something equivalent to it, all done, and ready to his hand, and thus be spared the trouble of pursuing his own experiments in that line, or at least accomplish by means of my suggestions, an important saving of *time* therein.

By a natural train of association, between the name of Mr. Randall, and the N. Y. State Ag. Society (in which he has for a long time had the office of corresponding secretary,) I am reminded of the Society's exhibition last fall, at Rochester, at which Mr. Jewett exhibited some specimens of his sheep. I believe the general impression there, among good judges, was, that Mr. J's Paulars were spurious, or at best but a "*humbug*;" at least I heard this opinion freely expressed by woolgrowers who were there, and examined them, and who could have no prejudice against them, nor any possible motive for disparaging them. I fancy that Mr. Jewett, in his visit to Rochester, found no advantage, and small reason for complacency of feeling, so far as his sheep were concerned. I looked with some little curiosity to see what would be said of them by the Society's committee on fine-woolled sheep; and found in their official report the following choice morceau. As it is short, I will take the liberty of quoting the entire paragraph. "Several bucks were presented for exhibition by Mr. S. W. Jewett, of Vermont, *said by him* to be of the Paular breed, which we *were also told* have produced heavy fleeces." The italicising of the extract, is my own, just to bring out its full meaning. Admirable! and prudent too, is it not? though I must confess it is rather meagre. It is not exactly what the poet calls "damning with faint praise." Of course the committee *must* say *something;* they felt bound in courtesy to do it. They could not in conscience express a favorable opinion, nor say anything more than they did. How *could* they have penned a sentence, which would say any *less!* If possible to do it, it could only be done by some use of language, which I have not learned. Their notice is truly "a caution." They were judges, and knew what they were talking about. They did not mean to be led into endorsing (as Mr. Jewett probably *intended* they *should* do) the *weight* of the *fleeces*, and the *story of the breed.* "*Said by him* to be *Paulars.*" That was *safe.* The committee was not quite "so green," as to let the Vermonter "*use*" them, and thus "come Yankee over 'em." They knew too much for that, by a good deal. I fancy that Mr. Jewett could hardly have made much *capital* out of the report of *that* committee, on the strength of which to sell spurious Paular bucks, last fall. The committee very properly would not consent to lend the official *imprimatur* and *influence* of the N. Y. State Society, in praise of his sheep, and in furtherance of his views of speculation on the public credulity, though it is hardly to be wondered at, that Mr. Jewett should have expected *almost anything* of them, after what he had previously experienced from the kind and obliging temper of his two friends, Mr. Randall, and the other Secretary of the State Society, Mr. Luther Tucker of the Albany Cultivator, in giving place for two succeeding years to his pictures and *ram* letters (i. e., advertisements in disguise,) in the published volumes of "Transactious of the N. Y. State Ag. Society;" thus making profitable use of the State Society, as a medium of special *advertising* for him through its publications, as he had previously been in the habit of using the columns of the Albany Cultivator, on which I have already animadverted, in my last communication.

The thought strikes me forcibly, that had Mr. Jewett (in the homely, but expressive words of the old saying,) "known which side his bread was buttered on," he would have left his sheep at home, sooner than have taken them to the Rochester exhibition. If he is a wise man, a *Solomon* indeed, he will in future avoid showing his sheep before a committee composed of such shrewd and skilful judges, as Mr. Morrell and others, who were on the Merino sheep committee at Rochester last year. Indeed, to do him justice, Mr. J. seems not to have been very *slow* to learn by experience, the lesson of wisdom; for though we expected him to come out and show some of his sheep at the exhibition of our American Institute last fall, (held in this city, shortly after the State Society fair at Rochester,) yet we saw nothing of either him or his sheep. He had grown wiser than to come. He had not forgotten Rochester; notwithstanding he had expressed, and given strong assurance, of his intention to come and exhibit his sheep at the city of New York, he disappointed us. But it admitted of easy explanation, and therefore his failing to come, excited but little surprise. For one, I was not disposed to blame him for not coming. I could understand his feelings, and he was right. It would have done him no good. To show his sheep before good judges at a few more such places, would have been well nigh "a finisher" to his profitable game of selling "pure *Paular* bucks." The business of *ram* selling, would soon be, as they say, at a discount with him.

I have not remarked on Mr. J's *personality*, in sneering at me as being a "city gentleman," who therefore could not have handled many sheep with his own hands. It is true, I have dwelt some in cities, but more and earlier in the *country;* and though I do not think to imitate his example in making a *boast* of the fact, yet (as *you* Mr. Editor, well know,) my hands in time past, *have* been and *still are*, not *un*used, nor wholly unfamiliar with the fleeces of sheep, and with the animals that produce them.

In order to prevent misunderstanding, I would here remark, that I do not wish needlessly and sweepingly, to disparage and call in question the *motives* of any or all who have had a hand or agency in giving currency to the "Paular" humbug, which I presume must, by this time, be considered as pretty well "used up" and exploded.

Even Mr. Jewett, (as I have before said,) may himself have been deceived, as well as have been the instrument of misleading others, as to the existence of "pure Paular" sheep in the country, at the present day, and in his possession.

I wish most particularly to be understood as not impeaching, by anything I have said, the motives or character of Mr. Randall, who I have no doubt, has been sincere in what he has written and published in praise and defence of Mr. Jewett's (and his own) spurious, or Vermont Paulars. Messrs. Jewett, Avery, & Co., in puffing their sheep, were certainly very fortunate in obtaining, or enjoying the benefit, of the pen and services of a writer so gifted and popular as Mr. R. But I do not for a moment suppose that a man so respectable, and honorable as Mr. Henry S. Randall, would have thus consented to act as puff-writer, or *trumpeter* to such a concern, had he not himself in some way been so far imposed upon and deceived, as honestly to believe in the purity of blood of those spurious or mongrel sheep, and that they were fairly entitled to the specific name of *Paular*, which was so improperly claimed for them by their owners, and whose claims to that high name, it is believed had in truth no foundation whatever. But with the light which they *now* have, I do not see why Mr. Randall and all other honest and fair-minded men, who have endorsed, or been instrumental in giving aid and currency to the Paular humbug, should not at once, and promptly, come out, and in a spirit of candor, publicly renounce their error, and admit that they have been deceived, and cannot maintain their ground. This would now be the frank and manly thing. I commend it to their attention. The *earlier* they *do* it, the *better* the thing will appear for them.

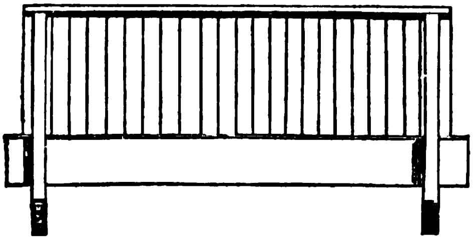
I cannot promise when you shall *again* hear from me, but remain, as ever, yours faithfully.

EXAMINER.

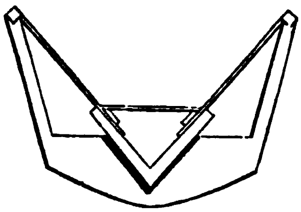
New York, February 1st, 1844.

CULTURE OF SILK.

As requested, I forward you a sketch of Mr. Gill's cradle for feeding worms, and the following account of the culture of silk.



SIDE VIEW OF FEEDING-CRADLE.—FIG. 53.



TRANSVERSE VIEW OF FEEDING-CRADLE.—FIG. 54.

I have five patches of mulberry; in all, ten or twelve acres; two parcels of which you have seen. The one adjoining my garden, by estimation, may furnish foliage sufficient for one and a half millions of worms. The mulberries consist of the White, Black, Alpine, Broosa, Moretta, Alata, Multicaulis, Asiatic, and large leaf Canton. The two latter I prefer for my own use, the Canton for early feeding with foliage, and the Asiatic for branch feeding. The Canton is highly approved of for producing heavy and firm cocoons, which, by competent testimony and experiments, have been found in favor of the Canton feed, as five to eight, and is the true species used by the Chinese, as testified by a resident missionary, the Rev. E. C. Bridgman, and more recently by Dr. Parker, while on his late visit to the United States. I consider the Pea-nut variety of worms the best for producing the most silk of a good quality.

From an elevated plat near my cocoonery you had a view of our extensive meadows spread out at the foot of Mount Holyoke. My cocoonery you have examined with its fixtures for feeding silk worms, the mode of open feeding, ventilator, and ventilating cradles. Since you left the whole has been completed, with hammocks suspended over the cradles easily put in motion, and so constructed that no offal can drop into the cradles beneath, nor interfere with the rocking motion or winding; the arrangement is much admired, and estimated to accommodate half a million of worms or more, to be fed at a time. About half of the cocoonery has hurdles of lattice-work, covered in part with gauze netting 4 feet wide and four tiers in height. The cocoonery is supposed to be sufficiently open on the sides, ends, and roof, to admit a free circulation of pure air. The flooring is the natural earth.

The past winter has been uncommonly severe on grape vines, fruit, forest, and mulberry trees; the Asiatic I found the most hardy of any other, and the Canton the earliest in foliage. On the 21st and 22d of May, were severe frosts, destroying garden vegetables and injuring some early mulberry foliage—ice was formed in many places. The accounts from Vermont and New Hampshire are so disastrous as to delay early feeding; while in Northampton, June 14, at one of my plantations, you saw silk worms in the act of winding, and others in good forwardness. On the day of your departure, I received a letter from a distant silk-grower, a staunch promoter of the *one early* and *open* crop system, that on account of the unpropitious season and condition of his trees, he would delay fetching out his worms to the last of June, and then make his great effort upon one crop. To provide against premature hatching of silk worms, or the disaster of an early frost, it is advisable to have foliage gathered and dried the year preceding, which being pulverized and moistened with water, may be given the worms until new foliage appears, and the worms will eat it freely.

To obtain the most and best foliage of the mulberry, it will be necessary, every spring to cut or head them down within three or four inches of the ground, and preserve the stalks for bark silk. I have a quantity of them saved, and bark peeled from the large Asiatics to be used for making bark silk, and a quantity of mulberry leaves saved for making paper; the whole process has not yet been carried out with either, but has been successfully done in France, as testified by M. Frassinett. I am endeavoring to have it demonstrated here, by subjecting both stalk and peeled bark to the operation of steaming with soap and water to facilitate the separation of the bark from the wood, and the outside cuticle from the fibrous substance of the bark, before trying the operation of the brake, for dressing, carding, spinning, &c. Should it prove successful it will be made public. Hopes are entertained that what has been done may be done again; that Yankee ingenuity and perseverance may prove a match for foreign cheap labor.

The present time has been called the age of invention and improvement. But if there is nothing new under the sun, and if what is, has been, and may be again, then we may hope to be benefited by the reproduction of astonishing results in all coming time, and even now, while there has been anxious inquiry for some easy mode to separate the bark of the mulberry from the wood, a historical fact has been recently communicated, by which some 240 years ago, in the year 1600, an accident occurred which resulted in the manufacture of a handsome fabric from the fibrous bark of the mulberry, with the inference, that the bark had been previously used for the manufacture of cordage, on account of the superior strength of the fibrous bark over that of other materials used for cordage.

Under date of June 6, 1844, I have been invored with a letter from the president of one of the most ancient and eminent literary institutions of our country, who expresses his opinion of the progress of silk culture as follows: "I am gratified to find a renewed and more general interest excited at the present time. If this awaking up to a scientific and practical consideration of the subject is not soon crowned with signal success, I am satisfied it will not be for want of enterprise or skill in our countrymen, but merely from the high price of labor, compared with the scanty wages given in other silk-growing countries; even this consideration, though it may *retard* for a while the complete success of this department of productive industry, will not prevent its ultimate triumph." The above is the opinion of one of the most scientific men of the age, and who in early life, was himself a silk-grower. His opinion accords with that of many others of high consideration in the United States.

While viewing the flourishing condition of one of my mulberry patches, you asked with what it had been manured? and received for answer, *ashes* and the *deciduous foliage*. The foliage you thought could be gathered for making paper, and answered, that there would be sufficient defective foliage left to manure the land. The foliage is richer than any stable manure, and stable manure should never be applied to the mulberry. I have not had occasion the last 5 or 6 years to use even ashes as a manure, but keep the land in good tilth by frequent hoeing. If you found these mulberries more flourishing than others you had seen, it may be attributed in a great measure to frequent hoeing and dressing with the decayed mulberry foliage.

The soil is a light sandy loam, and previous to its being stocked with mulberry would not yield the value of $10 in any crop, and now my feeder says, if his worms do well, he hopes to take $800 for the crop! A part of this lot being stocked with Alpine, Broosa, and Asiatic mulberry of 6 to 10 feet in height, in rows 3 feet apart, and having grown so vigorously as to shade each other, and liable to have spotted leaves, to avoid this, and procure more, larger, and better foliage, I have cut away or headed down every other row within 3 or 4 inches of the ground, and from the stumps have sprung up a multitude of thrifty sprouts now fit for use, and the leaves three times larger than the leaves on the standard trees, so fresh and tender, that it is hoped, in some measure, that they may answer the purpose of seedling foliage so highly recommended by M. Frassinett, who has the following encomium on *seedling* foliage: that 100 lbs. of such foliage, is worth near 200 lbs. of old leaves to make the same quantity of cocoons—in fact worth nearly double the quantity of other foliage. I have caused considerable bark to be stripped from the Asiatic trees cut away for manufacturing purposes, and M. Rouviere of Lyons, has proved that the bark of young shoots, submitted to the same process as hemp, yields abundant silk fibre to make beautiful tissues. I should advise silk-growers to preserve the shoots—have them barked in the best way, and the silky fibre rotted, carded, spun, and wove. M. Rouviere asserts, that it will be not only fine and strong, but take the most beautiful colors. Of the bark, ropes and nets are made in the Morea, and may be used with great advantage in the manufacture of paper, together with the foliage.

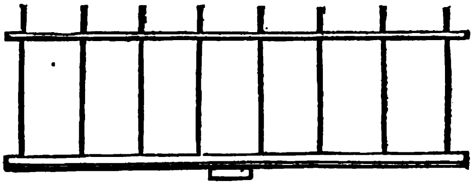
The Canton and Asiatic seed sown this year are in a flourishing condition for plantation use, exclusive of several mulberry plantations which will be for rent or growing silk on shares next spring. Up to the first of July, worms have been uncommonly healthy; the probable effects of more open ventilation than in former years.

Mr. Daboey, consul at Fayal, now in Boston, has two millions of worms at present on feed. S. Whitmarsh, at Jamaica, has 360 of what he calls *creolized native* eggs in constant feed, which go through the whole course to the cocoon in 24 days. The eggs hatch in 10 days after being laid. He has received the Silk Report, and made such improvement as to save, in all, nine tenths of the usual labor. The silk cause at Jamaica occasions great interest in England for its prosperity and success.

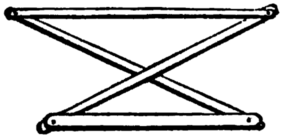
D. STEBBINS.

Northampton, Mass., July 1844.

HAY RIGGING.



SIDE VIEW OF HAY RIGGING.—FIG. 55.



TRANSVERSE VIEW OF HAY RIGGING.—FIG. 56.

ABOVE I give a rough drawing of a kind of hay rigging in use in this place, which, for cheapness, convenience, and efficiency, surpasses any I have ever seen.

Figure 55 represents a ladder 14 feet long, intended to be set edgewise on the bolsters of a wagon; the bottom edge being of light wood, say 3½ inches in diameter, and the top smaller, with the rounds or slats projecting about 4 inches. Let there be two such ladders placed slanting with the tops outward, and braced in the maner of figure 56, by pieces of boards with 3 inch holes to fit on the ends of the ladders, the tops being connected by horizontal pieces, and the bottoms likewise, and a piece connecting the top of one side with the bottom of the other, and secured by a wooden pin. A square staple should be put in the bottom of each ladder about the middle, through which to put a slat, and the bottom of the rigging can be formed of one or more boards resting on this slat and the bolsters of the wagon. One man can put a rigging of this kind together, and take it apart, and put it under shelter, instead of having to collect all the forces of a farm as is often the case with many lumbering things in use.

Charles Starr, Jr.

Mendham, N. J., July, 1844.

NEW YORK AGRICULTURAL INSTITUTE.

The object of this Institute is to afford facilities to those desirous of entering upon a course of study preparatory to farming, the advantage of which has been made evident by the researches of a large number of scientific men and experienced agriculturists.

The necessity for an improved system of husbandry is apparent from the decreasing harvests of many parts of the sea-board States. The present reckless tillage of too many of our farmers, reduces the finest lands to sterility by a succession of exhausting crops: and emigration is the consequence. These evils, unless speedily checked, will destroy our prosperity; for the cultivation of grain is becoming unprofitable, and too great an importation of food from the west would in a short time absorb the resources of the wealthiest eastern States. The only effectual remedy is the improvement of cultivation; not a mere application of tons of manure, and shiploads of lime, per acre, *but their economical use.* Common manuring has been practised from the remotest antiquity, and good crops have been obtained; *but it is the judicious addition of such substances as are necessary to the soil, in proper quantity, with a view of attaining a definite purpose, that constitutes professional agriculture.*

To individuals, this system will prove a source of wealth, even on ordinary lands. Less capital is required to hold the same surface, because every acre yields a revenue; two or three crops can be taken annually, where one is now scarcely attainable; the heavy expenses of manuring and keeping stock are reduced to a trifle; and machines can be made to perform much of the work now in the hands of laborers, sustained at a heavy expense. In maintaining sheep and cattle, the use of food properly prepared and selected for its chemical value, will reduce the charges to the lowest point, while the development of the animals is better secured.

By requiring a preliminary course of studies, and introducing the exactness of science into agriculture, it will rise to the dignity of a PROFESSION, and be regarded as a suitable calling for persons of liberal education, instead of an obscure art. Numbers of talented young men, who, after leaving college, see no other roads to distinction or wealth but medicine, engineering, law, or divinity, will direct their energies towards the improvement of farming; a change not less serviceable to the art than advantageous to themselves; whereby they exchange the uncertainty of competition in employments already overstocked for the certainty of systematic agriculture. The studies of the institute are agriculture, chemistry, analysis, and physiology; and measures have been taken to introduce a course of instruction in agricultural mechanics and rural architecture. These are distinct classes, so that students can attend any separately.

In *Agriculture* will be taught all facts in chemistry, geology, and botany, useful to the farmer—the drainage and preparation of soils—the collection, storage, and preservation of provender and fruits—the feeding and improvement of stock—management of orchards, vineyards, &c.—the preparation and *economy* of manures, both organic and mineral, with their action and causes of success or failure. In short, all the topics embraced in the courses given by Professors of Agriculture in European colleges, will be discussed.

Chemistry, as an abstract science, is taught by Professor Draper in the University.

Anatomy and *Physiology* by Professor Pattison. This course is directed more especially to an examination of the structure and functions of the human body, and may be attended with great profit to the student.

Analysis of Soils, the ashes of plants, and manures, will be conducted by the students under the direction of the subscriber, with such assistance as may be required.

The city of New York offers numerous advantages in carrying out the objects of the Institute—the facility of access—the high cultivation of many farms, nurseries, &c., in the vicinity—the conservatories and market gardens—the large collections of farming implements—the choice seeds obtainable—the numerous artificial and mineral manures that can be examined—constitute it the best locality in the United States. Good board and lodging near the University can be had for from $2,50 to to $3,00 per week.

The *Institute* is situated in the University of New York. It opens the first Monday of November, and continues in session until the 1st of March. This period has been chosen for the acccommodation of those engaged in farming. Fees for the course on Agriculture, $20; for Analysis, $30; for both, $40. The courses on Agriculture and Analysis are conducted by

D. P. Gardner, M. D.,

Formerly Prof. of Chemistry, &c., in Hampden, Sidney College, Va.

For further information address, post-paid, Dr. Gardner, 412 Fourth street, New York.

MAKING CHEESE.

On a farm capable of supporting twelve cows, two cheeses of about 10 lbs. each may daily be made, in the months of May, June, and July. The evening's milk is kept untouched till the next morning, when the cream is taken off and put to warm in a brass kettle, heated in order to bring it to the temperature of new milk from the cow. The cows being milked early in the morning, the morning's new milk and the night's milk prepared as above, are put into a large tub together, with the cream. Then a portion of rennet, which has been soaked in water milk-warm the evening before, and sufficient to coagulate the milk, is put into the tub, after which it is covered up warm and left to stand about half an hour, or till coagulated, at which time it is turned over with a bowl to separate the whey from the curds, and broken soon after with the hand and bowl, in very small particles; the whey being separated by standing some time, is taken from the curd and sinks to the bottom. The curd is then collected into a part of the tub, and a board is placed thereon which weighs from 60 to 120 lbs., to press out the whey. When it is getting into a more solid state, it is cut and turned over in slices several times to extract all the whey, and then weighed as before. These operations may occupy about an hour and a half. It is then taken from the tub and broken very small by the hand or cut very fine by a cheese-knife, and put into a cheese-vat, enlarged in depth by a hoop to hold the quantity, it being more than the bulk when finally put to the press. The side is pressed well by hand, and with a board well weighted placed at the top. The cheese is thus drained of its whey, then shifted out of the vat, having a cloth first spread on the top of it, and reversed on the cloth into another vat, or even into the same, which, however, must be always fresh scalded, and thus made warm before the cheese is returned into it. The top part is now broken down to the middle, has salt mixed with it, is reversed as before, then pressed by hand, weighed, and has the remaining whey extracted. This done, the cheese is again reversed into a scalded warm vat, with a cloth beneath the cheese; a hoop is also put round the upper edge of the cheese and within the sides of the vat, the cheese being first enclosed in a cloth, and the edge of it put within the vat. Finally, it is put into a press of thirteen pounds weight and pressed very hard. In four hours it is shifted and turned, and after four hours again treated in the same manner. After this it is taken out and carried to the drying room, and turned every day until it grows hard.

Huldah Andrews & Sons.

Winchester, Conn.

We have frequently eaten of the above cheese, and found it of a very superior quality. It bears a high reputation in this market, and commands more than double the price of common cheese. The method of making it seems simple; but we have no doubt the perfect neatness and regularity of all the manipulations tend greatly to its superiority. The sweet pastures of that part of Connecticut doubtless have their influence on the quality of milk, as it is impossible to make a superior kind of cheese or butter from poor pastures.

ADDRESS OF THE NEW YORK FARMERS' CLUB.

To Farmers, Gardeners, and the friends of Agriculture in all the States of the Union:

Fellow Citizens—In carrying into execution the great objects of the American Institute, it appears to us that the cultivation of the earth gains in its importance, from year to year, among the most enlightened men of the world. Since the time (1796) when our glorious Washington asked from the nation the aid of its purse and power to patronize Agriculture, (the last session of his administration,) to this day, that noble interest has been swelling in importance in all civilized countries, and now claims the choice men of all ranks and classes of society for its disciples.

You have a national department for your Navy—one for your Money—one for your Diplomacy—one for your Postage—you have a place to issue Patents to encourage the arts and useful inventions;—but you have no place in which can be concentrated the knowledge which must accompany your mighty labors in the garden and the field.

The New York Farmers' Club is desirous of your meeting in one great Convention here at the next annual show in October, on the 11th day thereof, to deliberate, among other things, upon the propriety of soliciting from Congress efficient aid to Agriculture, and as a means the establishment of a *Home Department* so earnestly desired by our Washington. We cordially approve of the address of the Institute calling such Convention, in which its objects are more fully set forth; and we hope the press of our country will lend its effectual aid in giving it publicity to farmers, gardeners, and the friends of agriculture generally.

You will perceive the great advantages to be derived from such a central point, where all information will be collected, and thence diffused. Let us then come together in the name of Washington, looking steadily and exclusively to the agricultural welfare of our country.

Jeremiah Johnson,

President of the New York Farmers' Club.

Henry Meigs, *Secretary.*

P. S. Gentlemen desirous of a copy of the full address, calling this Convention, will be supplied by applying at the Repository of the American Institute in the Park, New York. Editors who publish the same, and send a copy to the New York Farmers' Club, at the American Institute, will have forwarded to them a copy of the proceedings of the Convention.

NORTHERN CALENDAR FOR SEPTEMBER.

From the 1st to the 20th of this month is the proper time for sowing wheat in the northern States. If put in before, excessive heat and drought prevent early and rapid germination, which is undesirable, and exposes it when up to the ravages of the Hessian fly. If sown later, the plant seldom acquires sufficient depth and strength of root to stand the frost heaving of winter, and it is more liable to mildew or rust in the following summer. As this is the great agricultural staple in many of the States, it is of vast consequence in the aggregate, that every precaution should be taken to insure good crops.

If clay lands have been pared and burnt, or underdrained, or well charged with enriching vegetable manures, by which they have become lighter and more pervious to air and water, it is sufficiently prepared by two good plowings a little time previous to sowing; if such condition is lacking, no proper preparation can be made on such soil for wheat, without a good summer fallow, in which the soil is thrown up, where not saturated with rain so as to bake, and exposed to the ameliorating influences of air, sun, and dews. When this has been thoroughly done, such soils produce a large growth of the best wheat, and in Europe they are universally considered the very choicest wheat lands.

When the ground is in good condition to receive the seed, it may be sown and harrowed in with a heavy drag, burying the seed about three inches. The experiment has been tried for a series of years in Scotland of plowing it in to a depth of six inches; but we lack evidences of its utility in this country. The seed should be *perfectly clean*, free from light chaffy grains. To insure this, either raise it yourself, such as you know to be good, or pay a little extra and get it from an approved source, by which you will secure another advantage more than equivalent to the additional cost, the benefits of a change of soil, which is an advantage in all seeds. The next operation is preparing the seed. This is usually done by washing it in a strong brine, in which the light and imperfect grains, and the smut will float, and may be poured off. If very smutty, it should be washed three times thoroughly. After the brine has been mostly drained out, quick-lime must be sifted upon it, and stirred, so that every grain shall have a good coating. This process assists the future crops in two ways, by effectually destroying smut, and by giving an early and healthy growth to the plant. This is the system adopted by the best wheat growers in the central part of New York, the great granary of the north. Young's Annals gives the result of several experiments in sowing wheat, which proved that while one bed of unprepared wheat gave three hundred and seventy-seven heads of smutty wheat, those soaked in ley twenty-four hours, and lime-water the same time, each, gave not one head of smut.

This month seed corn should be selected. It can only be well done in the field. It ought to be taken from those stalks which have the greatest number of large, round, well-filled ears. In this way the Baden and the Dutton corn have attained all their well-earned celebrity. Corn now should be *cut up by the roots* and stacked. Never top your corn. It may dry up after topping, but there is an end to nourishment, as all the sap that goes to make the grain, first ascends into the leaf above the ear, where it is elaborated and perfected, and then descends to the ear for the perfection of the kernel. When thus secured in shocks, it is entirely beyond the effect of frost, and the stalk makes much better fodder for the cattle. Where land is kept in good condition by cultivating an early kind of corn, and cutting it up in this way and moving it to the sides of the field, or even compactly into the centre, rye or winter wheat may be got in upon the same land; yet when this system is practised, the soil must be well manured, for corn, or the successive grain crops, will be found to be too exhausting.

Fatting animals should now be pushed with all imaginable speed. Much more flesh can be put upon them from the 15th of August till the last of November, than in the same time during the cold weather, and on a much less quantity of feed. Indeed, so important is the difference, that it would be judicious for every man to reserve grain enough from his last year's stock to feed his swine, cattle, and sheep till his new crops are in readiness. If you have the right kind of swine, Berkshire, China, or any of the best improved breeds, they may be got in excellent condition on a clover pasture, the droppings from the orchard, and the slops from the dairy, so as to be easily fitted for the butcher. The exportation of pork to Europe, and its large consumption for lard oil, recently commenced in this country, will make it a most important object for the farmer hereafter, to select and propagate only the best breeds. Finish cutting and securing your crops of hemp and tobacco, if not previously done.

Kitchen Garden.—Select a dry, warm, protected place, and plant the lettuces sown last month for spring use. If the weather prove dry, let them be well watered. Early in this month, the Spanish kinds of radish can be sown, and on the approach of frost, taken up and preserved for winter use in the same way as turneps or beets. Hoe and thin out the crop of turneps during this month. About the middle of the month, sow cabbage seed to remain in the seed-bed all winter, and be ready for transplanting in the spring. Sow cauliflower and broccoli, also, to furnish plants for the spring. Gather each kind of seed as it ripens, and dry it well before putting it up.

Fruit Garden and Orchard.—Budding and inoculating peaches can be continued, and also the other fruits as long as the bark will peel. Trees and shrubs may be propagated by cuttings and layers. When it is necessary, trim pines, firs, walnut-trees, and maples, as the sap will not so much exude as in the spring. Plant beds of strawberries.

Flower Garden and Pleasure Grounds.—The directions for last month will also apply to this. Prepare beds for planting tulips, hyacinths, anemones, ranunculuses, and other flower roots and shrubs that are to be planted next month.

SOUTHERN CALENDAR FOR SEPTEMBER.

In this month, as well as the two succeeding, much time will be occupied in picking cotton, ginning, pressing, and hauling. Pick the cotton clean; admit no trash; look for the quality rather than the quantity. Do not attempt to gin too much in a day; let the mules take a steady, slow gait, for rapid motion will cut and break the fibre. In pressing, put in about 450 pounds in a bale; run the screw well *home*, and cover every particle of cotton; sew the sides and ends of the covering neatly, while in the press, if possible; put on not less than seven ropes—eight is more common.

In this month or the next, sow Egyptian oats, rye, and wheat. Sow two to three bushels of oats, and one and a half to two bushels of wheat or rye to the acre. Sow grass seeds both in this month and October.

Do not pick cotton when wet, for, beside the trouble of drying, the dirt and leaf become attached and stain it; and it frequently happens that quantities of cotton are kept wet by cloudy, rainy weather in September, in which the seeds sprout and injure materially the product. A few of those wet days can be employed in housing corn, gathering peas, preparing pastures, fencing, and other repairs.

In Florida and the southern part of the Union, three cuttings of tobacco can be taken from the original plant; the last cutting, however, will be of rather a weak quality. As soon as one crop is cut another immediately springs up. In selecting the sprouts, only one to each stalk should be allowed to grow, and this from those the most deeply rooted; all other sprouts should be destroyed. If, however, a plant is allowed once to be checked in its growth, it can never recover. In promoting the drying of the leaf, fire should never be resorted to, because it would impart a flavor injurious to the tobacco itself. In order to procure vigorous tobacco plants, the seed ought to be procured from the original stalk, and not from the second or third growth. It is best to allow a few plants to go to seed for the express purpose.

As we may expect showers in this month, sow spinach, lettuce, water and garden-cresses, cherville, endive, parsley, late cauliflowers, cabbages, radishes, and turneps. Inoculate with the bud, or set out monthly roses. Large carrots may be set out for seed this month if not previously done. Save pumpkins for winter use.

It will be seen that the list of premiums for the Seventeenth Show and Fair of the Agricultural Department of the American Institute, are as numerous and liberal as ever this year, and that nothing will be left undone by its managers to make it all its friends could wish. The place for the Cattle Show—the Vauxhall Gardens—is one of the best that could be pitched upon, and with the adjoining stables afford ample accommodation for all the Stock. The Manufacturing and Mechanical exhibitions will take place as usual at Niblo's. Several Conventions are to be held in this city connected with the proceedings, among which is one for the Farmers, and another for the Silk culturists. Addresses and evening Lectures will also be delivered as usual, and we are led to believe that everything will pass off with increased interest.

AGRICULTURAL AND HORTICULTURAL DEPARTMENT

Of the 17th Annual Show and Fair of the American Institute of the City of New York, commencing 7th Oct., 1844.

The Managers have the pleasure to state, that liberal and extensive arrangements have been entered into for a plowing match, a spading match, an exhibition of pure-blood and other cattle, and a horticultural show. The attention of farmers, stock-breeders, and horticulturists, is respectfully requested to the following regulations:—

PLOWING AND SPADING MATCHES.

The plowing and spading matches will take place in the vicinity of New York, on Tuesday, the 15th day of October. The following premiums will be awarded. For the best plowing, performed in one hour, on one eighth of an acre of greensward, a silver cup, value $8. Second best, silver medal. Third best, diploma.

The draught of the several plows offered for premiums will be tested by the dynamometer, and for the plow combining the greatest number of necessary requisites, silver cup. For the second best, silver medal.

For the best spading of ground, twenty feet long and ten feet wide, silver cup, value $8. Second best, silver medal. Third best, diploma. For the best polished steel spade, silver medal. Second best, Transactions of the American Institute. Third best, diploma.

EXHIBITION OF NATIVE AND PURE BLOOD CATTLE.—Vauxhall Garden, Bowery, New York, will be completely arranged with sheds, stalls, and pens, for the ample and safe accommodation of the various kinds of stock presented. A committee from the Board of Agriculture will have the superintendence of the arrangement of the cattle exhibition. Feed of every description will be provided on the ground at the cheapest possible rate, for those who wish to purchase; and as no entrance-money for cattle will be required, and exhibitors may bring their own feed, the expenses on the occasion will be greatly reduced. Careful and experienced men will be in attendance to assist in taking charge of the animals.

LIST OF PREMIUMS ON CATTLE.

NATIVE STOCK.

Bulls.—For the best native bull, 2 years old and upward, gold medal or silver cup, $15.

For the best native bull, 1 year old and upward, silver medal, $5.

For the best bull calf, silver medal, $5.

Cows.—For the best cow, 3 years old and upward, silver cup, $10.

For the best heifer, one year and upward, silver medal, $5.

For the best heifer calf, silver medal, $5.

IMPROVED STOCK.

Bulls.—For the best Durham bull, 2 years old and upward, gold medal or silver cup, $15.

For the best Hereford bull, 2 years old and upward, gold medal or silver cup, $15.

For the best Devon bull, 2 years old and upward, gold medal or silver cup, $15.

For the best 1 year old bull of any improved stock, silver cup, $10.

For the best Durham bull calf, silver medal, $5.
For the best Hereford " " $5.
For the best Devon " " $5.

Cows.—For the best Durham cow, 3 years old and upward, gold medal or silver cup, $15.

For the best Hereford cow, 3 years old and upward, gold medal or silver cup, $15.

For the best Devon cow, 3 years old and upward, gold medal or silver cup, $15.

For the best Durham heifer, one year and upward, silver cup, $8.

For the best Hereford heifer, 1 year and upward, silver cup, $8.

For the best Devon heifer, 1 year and upward, silver cup, $8.

For the best Durham calf, 1 year and upward, silver medal, $5.

For the best Hereford calf, 1 year and upward, silver medal, $5.

For the best Devon calf, 1 year and upward, silver medal, $5.

WORKING OXEN.

For the best pair of working oxen, silver cup, $15.

For the second best pair, silver medal, $5.

And in addition to the same, extra premiums of $10 each will be given for the 10 best teams exhibited.

FAT CATTLE.

For the best pair of fat cattle, gold medal or silver cup, $15.

For the best fat single ox, silver medal, $5.

SHEEP.

Long wools.—For the best long wool buck, silver cup, $8.

For the best long wool ewe, silver cup, $8.

For the best long wool lamb, silver medal, $5.

Middle wools.—For the best middle wool buck, silver cup, $8.

For the best middle wool ewe, silver cup, $8.

For the best middle wool lamb, silver medal, $5.

For the best wether, silver cup, $8.

SWINE.

For the best boar of any breed, silver cup, $8.
For the second best do. diploma.
For the best sow of any breed, silver cup, $8.
For the second best do. diploma.
For the best shote, silver medal, $5.

MULES.

For the best pair of working mules, silver cup, $10.

HORSES.

For the best stallion, gold medal or silver cup, $15.

For the second best do., silver medal.

For the best brood mare, gold medal or silver cup, $15.

For the second best brood mare, silver medal.

For the best colt, not exceeding two years old, silver cup, $8.

For the best Jack, silver cup, $8.

POULTRY.

For the best pair of turkeys,
For the best pair of Bremen geese,
For the best pair of tame “
For the best pair of mongrel “
For the best pair of Muscovy ducks,
For the best pair of common “
For the best pair of Dorking fowls,
For the best pair of Buck's Co. fowls,
For the best pair of Spanish fowls,
For the best pair of Poland fowls,
For the best pair of capons,
For the best assortment of pigeons,
To each, a volume of the Transactions of the American Institute.

To avoid confusion incident to exhibitions of this kind, the owners and exhibitors of cattle are requested to observe the following

REGULATIONS.

1. All entries of stock must be made in writing, at the committee room, Vauxhall Garden, on Monday, the 14th day of October, with full pedigrees of the animals, their breed, ages, owners' names, &c., and with such observations as to their food, thrift, constitution, milking or fattening qualities, as they may see fit to append. If previously sent to T. B. Wakeman, corresponding secretary of the Institute, they will be attended to. This is absolutely necessary, that the secretary may be able to prepare a catalogue in time for the use of the examining committee; and neither the Secretary nor the committee will be responsible for the omission of any animal on the catalogue, if this rule is not complied with.

2. All animals must be upon the ground by 9 o'clock, A. M., on Wednesday, Oct. 16, attended by their owners or keepers, for the inspection of the examining committee.

3. The judges upon stock will meet at Vauxhall Garden, at half past 8 o'clock, A. M., on the 16th day of October, to organize, and proceed immediately to the discharge of their several duties. On the completion of their awards, the committees will append to each prize animal a certificate designating the particular premium awarded.

4. No animals can be removed after entry, without the consent of the executive committee.

5. All animals will be admitted on the ground designated for the exhibition, on the presentation of a ticket, which the owners or proprietors will obtain from the secretary at the time of entering the same.

6. The rule in force at former fairs, of excluding animals which have already taken prizes of the American Institute, is abolished, and the premiums are now open for competition without reservation.

HORTICULTURAL EXHIBITION.

The committee would again earnestly solicit the friends of agriculture, horticulture, and of rural economy, to participate with the managers of the American Institute in the promotion of American interests, by an exhibition of the fruits of their industry and skill at their Seventeenth Annual Show, next October.

A spacious room will be provided for the reception of flowers, fruits, vegetables, agricultural and dairy productions, garden implements, ornaments, paintings, and such other articles in connexion with the several branches, as may be forwarded for exhibition or competition.

The managers have been again induced to offer agricultural and horticultural books as premiums for superior specimens of garden and field productions, because they consider mental acquirements the most enduring memorials; and as a beautifully embellished diploma will accompany each volume, it is presumed that competitors will prefer them to other premiums.

As it is expected, from the lateness of the season in which the Show is unavoidably held, that there will be a deficiency of some kinds of garden products for which premiums are offered, the committee are authorized to announce, that although the managers feel at liberty to withhold premiums when the articles exhibited are deemed inferior in their kinds by the judges, they have nevertheless determined to award all the book premiums offered, should sufficient articles be found to merit such premiums, and they have resolved further, to give discretionary premiums for extra supplies of flowers, or such other articles in the horticultural room as may be deemed by the judges as entitled to special distinction.

All articles intended to be exhibited, should be delivered as early as possible on Monday, the 7th of October, in order to have them properly arranged by 9 o'clock on Tuesday morning, at which time the room will be opened to the public.

Cultivators of flowers are respectfully invited to furnish fresh supplies on the morning of each day, which will be duly appreciated, and recorded on the annals of the Institute.

HORTICULTURAL PREMIUMS, &c.

FLOWERS.

For the best and greatest display of dahlias and other flowers exhibited during the Show, silver cup.

For the second best supply, Colman's European Agriculture and Rural Economy.

For the third best supply, Downing's Rural Architecture.

For the fourth best supply, Downing's Cottage Architecture.

For the fifth best supply, Hovey's Magazine of Horticulture, &c.

For the sixth best supply, Mrs. Loudon's Ladies' Flower Garden.

For the next large supply, American Flower Garden Directory.

For the next best supply, Buist's Rose Manual.

For any further supply, Bridgeman's Florists' Guide.

For the best assortment of American seedling dahlias, silver medal.

For the best and greatest variety of cut flowers, Browne's Trees of America.

For the second best variety of cut flowers, Mrs. Loudon's Ladies' Flower Garden.

For the third best variety of cut flowers, American Flower Garden Directory.

For the best and most beautiful boquet, Mrs. Loudon's Ladies' Flower Garden.

For the second best boquet, Hand Book of Plants.

For the third best boquet, American Flower Garden Directory.

For the fourth best boquet, Buist's Rose Manual.

For the fifth best boquet, Bridgeman's Florist's Guide.

FRUIT.

For the most successful vineyard culture of the native grape, silver medal.

For the best twelve table apples, Bridgeman's Gardeners' Assistant.

For the best twelve winter apples, Prince's Treatise on Fruits.

For the best cultivated cranberries, Farmer's Mine.

For the best and greatest variety of house grapes, Colman's European Agriculture and Rural Economy.

For the second best variety of house grapes, Browne's Trees of America.

For the third best variety of house grapes, Downing's Cottage Architecture.

For the best twelve bunches of Isabella grapes, Prince's Treatise on the Vine.

For the best twelve bunches of Catawba grapes, Kenrick's American Orchardist.

For the best twelve bunches of other variety, Buel's Farmers' Instructor.

For the next best twelve bunches of other variety, Bridgeman's Fruit Cultivator's Manual.

For the best and greatest variety of peaches and nectarines, Lindley's Theory of Horticulture.

For the best twelve peaches (freestones), Kenrick's American Orchardist.

For the best twelve peaches (clingstones), Bridgeman's Gardener's Assistant.

For the best twelve nectarines, Kenrick's American Orchardist.

For the best and greatest variety of pears, Browne's Trees of America.

For the best twelve table pears, Prince's Treatise on Fruit.

For the twelve winter pears, Bridgeman's Gardener's Assistant.

For the best twelve plums, Buel's Farmer's Instructor.

For the best twelve quinces, Kenrick's American Orchardist.

VEGETABLES.

For the choicest assortment of culinary vegetables, two volumes of Report of State Agricultural Society.

For the best and greatest variety of vegetable roots for cattle, two volumes of Report of State Agricultural Society.

For the best twelve blood beets, New York Farmer and Mechanic.

For the best twelve sugar beets, American Agriculturist.

For the best twelve mangle-wurzel beets, one volume of the Cultivator.

For the best six heads of Cape Broccoli, Bridgeman's Gardener's Assistant.

For the best six heads of cauliflower, Transactions of the American Institute.

For the best field of cabbage, silver medal.

For the best twelve heads of drumhead cabbage, Report of State Agricultural Society.

For the best twelve heads of Savoy cabbage, Bridgeman's Gardener's Assistant.

For the best twelve carrots for the table, New York Frrmer and Mechanic.

For the best twelve carrots for cattle, American Agriculturist.

For the best twelve roots of white celery, Report of State Agricultural Society.

For the best twelve roots of red celery, the Farmers' Mine.

For the best six egg plants, Bridgeman's Gardeners' Assistant.

For the best peck of white onions, Buel's Farmers' Instructor.

For the best peck of yellow onions, Transactions of the American Institute.

For the best peck of red onions, Hand Book of Plants.

For the best twelve parsneps for the table, American Agriculturist.

For the best twelve parsneps for cattle, New York Farmer and Mechanic.

For the best peck of American seedling potatoes, silver medal.

For the best half bushel of potatoes for the table, Bridgeman's Gardeners' Assistant.

For the best half bushel of potatoes for cattle, one volume of the Cultivator.

For the best three cheese pumpkins, Chapin's Hand Book of Plants.

For the best three cattle pumpkins, Buel's Farmers' Instructor.

For the best and largest pumpkin, Productive Farming.

For the best twelve roots of salsify, Bridgeman's Gardeners' Assistant.

For the best three squashes, Faulkner's Farmers' Manual.

For the best and largest squash, New York Farmer and Mechanic.

For the best half peck of Tomatoes, Bridgeman's Kitchen Gardeners' Instructor.

For the best twelve white, flat, or round turneps, one volume of the Cultivator.

For the best twelve yellow, flat, or round turneps, Farmer's Mine.

For the best twelve Russia turneps, American Agriculturist.

For the best twelve long white turneps, Bridgeman's Gardener's Assistant.

For the best sample of hops, not less than three pounds, American Agriculturist.

AGRICULTURAL PRODUCTS.

For the best and greatest variety of Indian corn, Colman's European Agriculture and Rural Economy.

For the best forty ears of white Indian corn, American Agriculturist.

For the best forty ears of yellow corn, the New York Farmer and Mechanic.

For the best bushel of wheat, Browne's Trees of America.

For the best bushel of rye, two volumes of the Cultivator.

For the best bushel of oats, Colman's European Agriculture and Rural Economy.

For the best bushel of barley, two volumes of the Cultivator.

For the best bushel of buckwheat, the New York Farmer and Mechanic.

For the best specimen of Egyptian corn, American Agriculturist.

PRODUCTS OF THE DAIRY.

For the best specimen of butter, not less than 100 lbs., silver cup.

For the best specimen of cheese, not less than 100 lbs., silver cup.

Discretionary premiums for the second and third best of each of the above articles.

GARDEN IMPLEMENTS, ORNAMENTS, &C.

For the greatest variety and best finished garden implements, gold medal.

For the invention of any new and useful agricultural or horticultural implement, silver medal.

For the best specimen of statuary for ornamenting gardens, Report of the State Agricultural Society.

For the best portable machine for watering gardens, Transactions of the American Institute.

For the best specimen of fruit and flower stands, Flower Garden Directory.

For the best wire-work for training creeping plants, Transactions of the American Institute.

For a display of rustic work, American Agriculturist.

To the Competitors for Premiums in Agriculture, at the 17th Annual Fair of the American Institute.

The act of the Legislature of this State, of May 5th, 1841, requires that "before any premium shall be delivered, the person claiming the same, or to whom the same may be awarded, shall deliver in writing to the president of the society, as accurate a description of the process in preparing the soil, including the quantity and quality of manure applied, and in raising the crop, or in feeding the animal, as may be, and also of the expense and product of the crop, or of increase in value of the animal, with the view of showing accurately the profit of cultivating the crop, or feeding or fattening the animal."

You are requested to furnish such description to the clerk at the time of entry.

BOARD OF AGRICULTURE OF THE AMERICAN INSTITUTE.

Jeremiah Johnson,
Thomas Addis Emmet,
Henry Whitney,
Nicholas Wyckoff,
Edward Clark,
Philip Schuyler,
Thomas Bridgeman,
R. S. Livingston,
J. Lawrence Smith,
Henry A. Field,
W. J. Townsend,
Ralph Lockwood,
Samuel Stevens,
Robert L. Pell,
D. J. Browne,
Henry Meigs.

PROGRAMME.

Friday and Saturday, Oct. 4th and 5th.—Days for receiving contributions for competition or exhibition, with the exception of cattle, stock, flowers, &c.

FIRST WEEK OF THE EXHIBITION.

Monday, Oct. 7th, at 12 o'clock, M., the garden will be opened to the public. At half past 7 o'clock, P. M., an address will be delivered in the great saloon, by a distinguished citizen. The evening will close by a splendid display of fireworks.

Tuesday, Oct. 8th.—The exhibition will commence at 9 o'clock, A. M., and close at 10, P. M., which will be the hours of opening and closing during the Show. A short address at half past 7 o'clock, P. M.

Wednesday, Oct. 9th.—The second annual convention of silk culturists and manufacturers will be held at the Repository of the American Institute, in the Park, at half past 10 o'clock, A. M. An address on silk will be delivered in Niblo's saloon, at half past 7 o'clock, P. M.

Thursday, Oct. 10th.—Silk Convention continued.

Friday, Oct. 11th.—A national convention of farmers and gardeners will be held at the Repository of the Institute, in the Park, at half past 10 o'clock, A. M. An address on agriculture at half past 7 o'clock, P. M.

Saturday, Oct. 12th.—Convention of farmers and gardeners continued. Address in Niblo's Saloon at half past 7 o'clock, P. M. Fireworks at half past 9 o'clock.

SECOND WEEK OF THE EXHIBITION.—*Cattle Show at Vauxhall Garden, &c.*

Monday, Oct. 14th.—List of horses, cattle, and other live stock, must be in possession of the managers at Vauxhall Garden, to insure their being placed on the catalogue. If previously forwarded to the corresponding secretary of the Institute, they will be attended to. Pedigrees, signed by owners, required.

Tuesday, Oct. 15th.—Making catalogue of cattle, &c. Also, ninth annual plowing match. Testing of plows, and spading match, in the vicinity of New York. An address will be delivered in the field.

Wednesday, Oct. 16th.—The exhibition of horses, cattle, &c., will open at Vauxhall Garden. Cattle must be on the ground by 9 o'clock, A. M.

Thursday, Oct. 17th.—Last day of cattle exhibition. Address on Agriculture, in Niblo's Saloon, at half past 7 o'clock, P. M.

Friday, Oct. 18th.—Sale of cattle and other live stock by private contract. Anniversary Address by the Hon. A. H. H. Stuart, of Virginia, at half past 7 o'clock, P. M.

Other interesting operations and displays will occupy portions of the time from day to day during the Show, which will be seasonably noticed in future circulars, and in the public prints.

To the individual or company who shall exhibit the greatest and best variety of useful machines and implements for farming . . . . a gold medal.

Do. Do. Horticultural implements, Do.
Do. Do. Woollen fabrics, Do.
Do. Do. Cotton " Do.
Do. Do. Silk " Do.
Do. Do. Hardware, Do.
Do. Do. Household manufactures, Do.

Extra premiums of $10 for each of the five best inventions, adjudged by a committee appointed for that purpose, to be the most useful among the new inventions of the Seventeenth Show.

Valuable American seedlings of fruit and culinary vegetables will command the attention of the managers. Also, the exhibition of American madder, woad, and indigo, with their modes of culture. Also, American water-rotted and manufactured hemp.

For the purpose of examining standing crops in fields, orchards, vineyards, gardens, &c., a travelling committee of the Show will be appointed, who will make examinations within convenient distances, and report. Seasonable notices should be left with the corresponding secretary of the Institute, by those desirous of being visited.

A cordial invitation is hereby respectfully extended to every friend of industry and improvement in the United States—to the sages, patriots, and statesmen of every State, that each and all may come and participate, and swell the sublime gathering, and make it what it should be—the grand American Jubilee of Industry and the Arts.

MANAGERS.

John Campbell,
Jas. Van Norden,
Adoniram Chandler,
Edwd. T. Backhouse,
H. W. Childs,
Joseph Curtis,
James Hamilton,
Geo. R. J. Bowdoin,
Geo. Endicott,
Wm. Hall,
Joseph Torrey,
Jas. R. Smith,
Martin E. Thompson,
Isaac Fryer,
John D. Ward,
Edward Clark,
Robert Lovett,
Gurdon J. Leeds,
A. D. Frye,
T. B. Stillman,
Joseph Cowdin,
Jas. J. Mapes,
Geo. C. De Kay,
C. C. Haven,
Chas. Mapes,
R. M. Hoe,
W. P. Disosway,
Geo. F. Barnard,
Henry Meigs,
T. B. Wakeman,

ANNUAL SHOW AND FAIR OF THE NEW YORK STATE AGRICULTURAL SOCIETY.

WE again call attention to this splendid *fête*—the Farmers' great annual Festival—which takes place at Poughkeepsie, commencing Tuesday, the 17th of September, and continuing till Thursday, the 20th. Extensive preparations are on foot for it, and we have no doubt it will be the most superb and gratifying spectacle of any kind that ever came off in America. Nothing can be more useful or commendable than Agricultural Shows; and it affords us much pleasure to learn, that they are fast coming to be so considered by the Farmers, for whose great benefit they are especially got up. Moreover, they are rapidly winning their way into the favor of all classes, and we are of opinion but few years will pass over, before every State in the Union will have its own Show, backed by separate ones of most of the counties throughout the land. It affords us no little gratification that New York, the Empire State, should be the first to set the great example and carry it out so liberally and effectually. We hope and trust that all who can, will attend, and also bring their families with them; for it will not only be a superb festival, well worth regarding, but prove a school of much learning to whoever may be there, whether large or small.

The regular Annual Address before the State Society and visiters generally, will be delivered by Mr. BANCROFT, the historian. Several other gentlemen, distinguished as agriculturists or as public functionaries, will also comply with requests by addressing the society and their fellow-citizens during the afternoons or evenings of the assemblage.

PROGRAMME.

The plan agreed upon by the Executive Committee, requires the enclosure of about ten acres of ground, within a high fence—the erections inside to consist of four buildings, in dimensions each one hundred feet by thirty—making a total length of five hundred feet, allowing for the spaces between the buildings; and in addition to these erections, of plain and substantial edifices for the temporary purpose, several tents or marques will be erected for various purposes inside the enclosure, while suitable buildings for ticket and business offices will be erected in front of the enclosure. Large spaces of meadow-land surround the location, so that neither the crowds nor the people of the village need be incommoded by the pressure of horses and carriages within narrow limits. Wells will be dug within the enclosure for the accommodation of cattle, &c.; a carriage-way will run round the fence inside, to enable families and parties to drive around the grounds to see the animals, after examining the various articles exhibited in the several buildings, &c.

One of these large buildings will be devoted to the LADIES, for the exhibition of flowers, fruits, needlework, &c.; and the greatest care will be taken to render this share of the exhibition satisfactory to the ladies, who, in numbers scarcely less than the gentlemen, visit these annual exhibitions. This branch of the arrangements will be chiefly under the supervision of the ladies of Poughkeepsie and other neighboring villages, assisted by Mr. Walsh, of Lansingburgh, Mr. Downing of Newburgh, Mr. Bateham of Rochester, and other gentlemen of the Society.

Another building will be devoted to the exhibition of domestic industry generally, which may be sent for exhibition or competition, as connected directly or indirectly with the interest or comfort of the farming community. MECHANICS, MANUFACTURERS, and INVENTORS of implements and machinery for lessening labor, or rendering labor more productive, (and all such are invited to send specimens of their industry or ingenuity,) may find their own interest promoted, as well as public curiosity gratified, by sending specimens to the Show, and notifying the recording secretary *immediately* of their intention.

The other large buildings will be devoted to the exhibition of AGRICULTURAL PRODUCTIONS generally—to specimens of grain, vegetables, implements of husbandry, and to all other articles (except animals) not embraced in the other buildings. GARDENERS as well as FARMERS and FRUIT-GROWERS, will here find accommodations for any articles they may choose to send.

In connexion with these arrangements, it may be well to state that no charge is made for entering articles designed merely for exhibition, and only one dollar from persons who wish to compete for any of the five hundred premiums offered on all sorts of articles. The payment of one dollar constitutes membership, and entitles the family of the member to admission; and the small charge of one shilling is made for other visiters, to aid in preserving order, as well as for assisting the Society in paying premiums.

Plowing Match.—This takes place on Tuesday, the 17th of September. To correct some misapprehension on the subject, it may be added that the *Trial of plows and other implements* is different from the Plowing Match. The former is for the purpose of testing the qualities of all new and improved farming implements.

General Exhibition.—Commences on Wednesday, the 18th, and continues all Thursday, the 19th. Friday and Saturday, the 20th and 21st, will be days of private sale.

All persons intending to compete for the Society's premiums, must become members, which they can do by the payment of $1 at the time of entering their articles for exhibition.

All members of the Society will be furnished with a member's badge, which will admit them and their families to the show yards. Tickets for admission, to those who are not members, twelve and a half cents.

The list of premiums to be awarded at this Show, was published in our May Number, p. 146. Since then, the following alterations and additions have been made:—

Books and Essays for Publication.—For the best Textbook on Agriculture, for the use of schools, $100.

Cattle.—Best Ayrshire Bull, 3 years old, $15. Second best, $10.

Jacks.—Best, $15. Second best, $10.

Mules.—Best pair, $15. Second best, $10.

Sheep.—In the classes for sheep, the prizes are for the best *three* ewes, instead of the "best ewe," as heretofore published.

The following is a list of the judges appointed to award the several premiums:—

On Farms.—J. P. Beekman, Kinderhook; J. S. Wadsworth, Geneseo; Thomas Hillhouse, Albany.

On trial of Plows.—Caleb N. Bement, Albany; John Wilkinson, Union Vale; L. B. Langworthy, Rochester.

On Farm Implements.—T. V. W. Anthony, Fishkill;

Geo. W. Patterson, Westfield; Alvan Bradley, Whitesboro.

On Cattle, Class I.—Alexander Grant, Dover; Anthony Van Bergen, Coxsackie; G. V. Sacket, Seneca Falls.

On Cattle, Classes II. and III.—Henry Whitney, New Haven, Ct.; Dr. J. A. Poole, New Brunswick, N. J.; Thomas Hollis, Butternuts.

On Cattle, Classes IV., V., VI., VII., VIII.—Adam Ferguson, Watertown, Canada West; George Randall, New Bedford, Mass; Elnathan Haxtun, Beekman.

On Oxen and fat Cattle.—L. C. Ball, Hoosick; John T. Norton, Farmington, Conn.; Henry A Mesier, Fishkill.

On Stallions.—Lewis F. Allen, Buffalo; Theodore S. Faxon, Utica; John A King, Jamaica.

On breeding Mares.—John C. Stevens, New York; George Fordon, Geneva; Gen. A. T. Dunham, Watervliet.

On matched Horses.—John M. Sherwood, Auburn; Wm. T. Porter, New York; Duncan Robinson, Fishkill.

On Jacks and Mules.—Jeremiah Johnson, Brooklyn; Noah Gridley, Amenia; Dr. Sam. McClellan, Nassau.

On Sheep, Class I.—Henry Rhodes, Trenton; Wm. A. McCulloch, Greenbush; Elias L. Barton, La Grange.

On Sheep, Class II.—Sanford Howard, Albany; Edward T. Hallock, Milton; Wm. Fuller, Skaneateles.

On Sheep, Class III.—Edmund Kirby, Brownville; Henry K. Morrell, Caroline Center; Hugh T. Brooks, Wyoming.

On Swine.—H. S. Randall, Cortlandville; Samuel Youngs, Oyster Bay; Samuel Wait, Montgomery.

On Butter.—Alexander Walsh, Lansingburgh; Z. Barton Stout, Richmond; R. L. Pell, Pelham.

On Cheese.—Hon. Elijah Rhoades, Syracuse; W. A. S. North, Duanesburgh; Tobias L. Hogeboom, Ghent.

On Maple and Corn-stalk Sugar.—F. J. Betts, Newburgh; Myron Adams, East Bloomfield; Morgan Carpenter, Stamford.

On Silk.—O. Hungerford, Watertown; J. R. Barbour, Oxford, Mass.; Daniel Stebbins, Northampton, Mass.

On Domestic Manufactures.—Hon. Samuel Works, Lockport; Ransom Cook, Saratoga Springs; Joseph Arnold, Kingston.

On Vegetables.—Wm. Wilson, Albany; T. Bridgman, New York; D. B. Futler, Hyde Park.

On Fruits.—J. J. Thomas, Macedon; J. F. Sheaf, Poughkeepsie; Albert Heartt, Troy.

On Flowers.—James Lennox, New York; A. J. Downing, Newburgh; M. B. Bateham, Rochester.

On Plowing.—Joel B. Nott, Guilderland; Elon Comstock, Rome; Martin Springer, Brunswick; Henry Staats, Red Hook; Warner Abbot, Otisco.

On Discretionary Premiums.—Hon. Robert Denniston, Salisbury Mills; Hon. Abram Bockee, Federal Store; Samuel Ackerly, M. D., Richmond, L. I.; J. J. Viele, Lansingburgh; J. B. Duane, Duanesburgh.

On Cattle, &c., from other States.—Hon. Levi Lincoln, Worcester; James Tallmadge, New York; James Gowan, Philadelphia; H. L. Ellsworth, Washington; J. W. Thompson, Wilmington.

On the Transportation of Stock to the Show.—Messrs. Vassar and Wilkinson of Poughkeepsie, Bement and Hillhouse of Albany, Vail of Troy, Walsh of Lansingburgh, Beekman of Kinderhook, and O'Reilly of Albany.

Committee in charge of the Grounds.—Matthew Vassar, George Wilkinson, George Van Kleeck, Charles M. Pelton, and David B. Lent.

On Arrangements at the Place of Exhibition.—Alexander Walsh, of Lansingburgh, E. P. Prentice, of Albany, Thos. L. Davies of Poughkeepsie, Benj. P. Johnson of Rome, Luther Tucker of Albany, George Vail of Troy, and N. Sweet of Poughkeepsie.

Committee of Reception.—Jas. Lennox, Francis Granger, Erastus Corning, Abm. Bockee, Elijah Rhoades, John Allen, H. A. Livingston, Robert Donaldson, Gerrit Smith, Dudley B. Fuller, Joel Rathbone, Z. Barton Stout, R. L. Pell, Wm. P. Van Rensselaer, James S. Wadsworth, L. F. Allen, Luther Tucker, James Tallmadge, T. L. Davies, J. W. Knevels, Judge Ruggles, A. T. Cowman, Elisha Johnson, and Ward Hunt, together with the officers of the State Society.

On Arrangements generally.—Joel Rathbone, of Albany, Frederick J. Betts of Newburgh, and Henry O'Reilly, of Albany.

The committees on prize essays, on crops, on farming experiments, and on other subjects not requiring decision before the annual meeting in January, are not included in the foregoing list.

In reference to the transportation of articles to and from the show, it may be remarked, that the railroad companies east and west of Albany and Troy, have manifested a disposition, as heretofore, to facilitate the business by running trains purposely to accommodate stock and other articles for the Show. Tow-boats, purposely engaged, will leave Troy and Albany on Monday morning, Sept. 16, at 7 and 8 o'clock, before which hour it is hoped that all articles will be ready for embarkation. The regular Poughkeepsie tow-boats from New York, especially on Monday evening, Sept. 16, will furnish all requisite accommodations for stock and other articles coming up to the Show.

One of the principal causes of confusion at former Shows—the numerous crowds at the ticket-office and at the gates—will be remedied at the approaching Show, by placing tickets for sale in several stores in Poughkeepsie, as well as in the ticket-office; and also by multiplying the number of gates for carriages and pedestrians.

Extensive preparations are in progress at the hotels and otherwise in Poughkeepsie, to accommodate visiters to the Show, as well as practicable. The steamboat captains will lend all reasonable facilities, and some boats moored in the river will accommodate many who may not otherwise find quarters during the Show, while the frequent passage of boats up and down the river will enable visiters to spend some hours or a night at Newburgh, West Point, or elsewhere, within an hour's sail of the Show-ground.

☞ Editors in this and the neighboring States are respectfully requested to give their readers an outline of the arrangements for the Show; and such editors as design to visit the Show, are requested to notify the Secretary in advance.

HENRY O'RIELLY, *Rec. Sec.*

We can only add, that the excursion to Poughkeepsie will be well worthy the attention of citizens and strangers; as they will here have an opportunity of not only seeing the greatest Agricultural Show that has ever taken place in this country, but the additional gratification of viewing on their route up the Hudson, scenery unsurpassed, and many places of great interest—historical and otherwise—scattered along the shores of one of the noblest rivers of the world. It will be a healthful and delightful excursion, and we again express the hope that all who can will not fail to attend.

FOREIGN AGRICULTURAL NEWS.

By the arrival of the steam-ship Acadia, we are in receipt of our European Journals to the 4th of August.

MARKETS.—*Ashes.* A decline has been submitted to of 6*d* per cwt., since which they have been in active demand. *Cotton* remains without material change—it had been up a trifle and down again the past month. The stock has increased 78,390 bales during July; but as all the manufacturers were overrunning with orders and in full work, a decline for the present was not anticipated; the great losses on the Mississippi have contributed to its firmness. The sales were large. The stock on hand the 1st of August was 998,000 bales, against 945,000 same time last year. *Flour* and *Grain* have met with a further decline, and are nominal. *Provisions.* The finer kinds are in good demand, the stock of which is much reduced. Inferior to ordinary qualities are little inquired for. *Lard* and *Tallow* were dull, with a downward tendency. *Naval Stores* are in good request at a trifling reduction. *Tobacco* without change.

Money is plenty as usual, and not worth over 1½ to 2 per cent. The bullion in the bank of England is £15,485,000.

American Stocks. The most business the past month has been done in New York State securities. All stocks of a first rate kind, and which had regularly paid their dividends, were gradually looking up.

Trade in general was very active.

The Weather continued favorable, and the grain harvest had begun under the best auspices.

Show of the Royal Agricultural Society of England.—The annual Show of this largely increasing and noble Society, took place at Southampton on the 23d, 24th, and 25th of July. In consequence of being held in the extreme part of the south of England, far away from the great stock regions, there was not near as great a display of animals as usual; in every other respect the exhibition was a magnificent one, and seems to have come off with high satisfaction. Upward of 30,000 persons visited the show-yard the last day, and quite a number of agriculturists from Holland, Belgium, France, Germany, and other parts of Europe, were present, for the purpose of ascertaining what might be found superior in England, and for purchasing implements, seeds, stock, &c. In the exhibition were 38 horses, 182 head of neat cattle, 207 sheep, and 150 swine, which is quite a meager display for England, especially in the two first named class of animals. Of the implement yard the London Farmer's Magazine thus speaks:

"The portion of the ground appropriated to the implements was about half of the whole enclosure, which was much larger than on any previous occasion; hence, as may be inferred, the most ample accommodation was provided for the various exhibiters, and a good opportunity given to the visiters to inspect the plows, &c. This large square was occupied by open sheds, arranged in parallel lines, and beneath the implements properly numbered and deposited. Viewing these sheds from any part, a most pleasing effect was produced; indeed, everything had a most pleasing, most unique appearance. As to the various implements of husbandry, we may venture to observe that a greater display of human ingenuity and skill was never before seen. For instance, there were nearly fifty specimens of various kinds of carts; upward of sixty of chaff, hay, and straw cutters; several variety of churns and cheese-pressers; between thirty and forty specimens of crushers; about a hundred different kinds of drills; thirty or forty kinds of harrows; and plows to be reckoned by hundreds. Then there were pumps, racks, rollers, scarifiers, sowing-machines, steam-engines, troughs, wheels, weighing-machines, winnowing-machines, dressing-machines, and machines and agricultural implements *ad infinitum;* so that one might soon have become amazed ere he had half gone through this extraordinary exhibition, or comprehended a fiftieth part of the ingenious inventions which were submitted to his notice."

Several thousand pounds sterling were distributed in premiums on the occasion, and all the proceedings were characterized with the best and most liberal spirit. Of course many distinguished men were present, and the grand dinner went off with great satisfaction. After the cloth was removed, several gentlemen made elaborate speeches; and among others, Chevalier Bunsen, the Prussian minister, who said that the "government of Prussia was taking great care to improve the condition of the farming population throughout its dominions, and to bring to bear *for the benefit of all, every known practical improvement in agriculture.*" A noble and most praiseworthy example, which we could wish to see imitated by our own government in these United States.

The sales of stock were unusually large, on the 26th, the day after the show. Durham cattle of rather an ordinary quality, brought from £36 to £145, ($180 to $725;) sheep from £10 to £50, ($50 to $150;) and other stock in proportion.

Upon the whole, the Society can congratulate itself on a continued increase of members and funds, and of awakening public attention more and more to the great national importance of its proceedings.

White Crows.—We were shown to-day, at a house in the Kirkgate, a brace of crows nearly as white as snow. They are this year's birds, and were taken out of the same nest in company with a brother or sister of the ordinary color. When anxious for food, they caw their vernacular in splendid style, run about the floor, and are as well grown as birds can well be of the same age.—*Dumfries Courier.*

Agricultural College.—At a public meeting recently held in Southampton, for the purpose of establishing an agricultural college, Lord Bathurst, in addition to providing a suitable farm of 400 acres, as an appendage to it, and on which to erect suitable buildings, has advanced, with great liberality, £2000 in furtherance of the object.

At the above, Dr. Buckland, the celebrated geologist, moved the following excellent resolution:

That this meeting warmly recommends the agricultural community to give every support and encouragement to the establishment of this college, which they regard as the first step in the right direction for training up the rising generation of farmers upon a sound foundation; and they would especially urge on farmers generally, the importance of securing to their children intended for the same occupation, the great advantages to be derived from the kind of education provided by such an institution.

We sincerely hope and trust that we may soon be able to record the founding of a similar college in the State of New York.

English Stock going to Russia.—Prince Albert has sent as a present to the Emperor of Russia, a beautiful Yorkshire stallion valued at 600 guineas, a splendid Durham bull valued at £300, and a pure Leicester ram.

We observe that the same high functionary has commenced bee-keeping, and has engaged to manage his apiary, a Quaker, who addresses the Queen and Prince as "friends," and remains covered in their presence.

Guano.—It is found, on looking over Lloyd's list, that not fewer than one thousand vessels have left

Great Britain within a few months, in search of guano. It will soon be cheap enough there and here also, and must unquestionably sell at a loss within six months.

We would advise our friends now to be cautious about embarking in the business to any great extent.

Second No. of Mr. Colman's European Agricultural Tour.—Mr. Colman writes us from London under date of 17th July, that the second and third Nos. of his Tour are nearly ready for the press, and adds:

"I could have completed near the half of my work had I been willing to give a mere journal of my tour; but that would neither satisfy myself nor my patrons. Requiring, as the work does, a pretty extensive observation of the field before I undertake a map and description of it, you are aware that it can not be done in a hurry. If my friends, however, will have patience with me, I will do everything in my power to evince my gratitude, and as far as I am able, satisfy their reasonable expectations. Of course in such a work, speaking as I do to a mixed audience, some miscellaneous matter will properly come in; but as I mean to give that mainly which is practical and useful, and that which may be applied in my own country, it is indispensable that I should proceed cautiously, and that my statements should be made up on sufficient grounds, and be well authenticated. My great error has been in promising my report *too soon*, an error which naturally arose out of very imperfect conceptions of the boldness of the undertaking, and the magnitude of my task."

Bone Dust as Food.—Mr. Karkeek, in a recent lecture, says, that it has been suggested by Professor Johnstone, of Durham, as in many cases grain is too expensive a food, and these kinds of grain do not exactly agree in other respects with horses, (we mean barley and wheat,) that *bone-dust* or bone-meal should be given as an article of general food for growing animals. There are many things which look well in theory that will not bear the test of practice; but, should this succeed, we might then hope to minister directly to the weak limbs of the young stock, and at pleasure provide the spare-boned colt with the materials out of which limbs of greater strength might be built up.

As a comment on the above, we have been in the habit, for years, of feeding more or less bone-dust to pigs; but could never see that beyond the gelatine contained therein, that the animals derived much nutriment from such food, whether given whole or ground, or that it caused them to thrive much faster than when fed on grain and vegetables without being mixed with bone-dust.

To destroy Rats.—The following recipe for the destruction of rats, has been communicated by Dr. Ure to the council of the English Agricultural Society, and is highly recommended as the best known means of getting rid of these most obnoxious and destructive vermin. It has been tried by several intelligent persons, and found perfectly effectual.

"Melt hog's lard in a bottle plunged in water heated to about 150° Fahrenheit; introduce into it half an ounce of phosphorus for every pound of lard, then add a pint of proof-spirit or whiskey; cork the bottle firmly after its contents have been heated to 150°, taking it at the same time out of the water-bath, and agitate smartly till the phosphorus becomes uniformly diffused, forming a milky-looking liquid. This mixture being cooled, with occasional agitation at first, will afford a white compound of phosphorus and lard, from which the spirit spontaneously separates, and may be poured off to be used again, for none of it enters into the combination, but it merely serves to comminute the phosphorus, and to diffuse it in very fine particles through the lard. This fatty compound, on being warmed very gently, may be poured out into a mixture of wheat flour and sugar incorporated therewith, and then flavored with oil of rhodium, or not, at pleasure. The flavor may be varied with oil of aniseed, &c. This dough being made into pellets, is to be laid in rat-holes. By its luminousness in the dark, it attracts their notice, and being agreeable to their palates and noses, it is readily eaten, and proves certainly fatal. They soon are seen issuing from their lurking-places to seek for water to quench their burning thirst and bowels; and they commonly die near the water. They continue to eat it as long as it is offered to them, without being deterred by the fate of their fellows, as is known to be the case with arsenical doses. It may be an easy guide for those who are desirous of following Dr. Ure's prescription, and may not have a thermometer at hand, to know that a temperature of 150° of Fahrenheit is equivalent to a degree of heat midway between that at which white of egg coagulates and white wax melts."

An extraordinary Durham Milker.—Mr. Hewer, of Charlton, near Brackley, Northamptonshire, has a cow from which was made nineteen and three quarter pounds of butter last week; the cream skimmed but twice, without second butter. It is supposed by competent judges that this cow will produce twenty-four pounds of butter a week if second butter is churned. She is of the Durham breed, and a remarkably fine beast, six years old. Her feed is *grass and a little hay only!* She gives eight gallons of milk per day.—*Northampton Herald.*

Simple and effectual Remedy for Hove in Cattle.—Try the remedy of an egg-shell full of tar rather than attempt the barbarous practice of sticking. If two men hold the animal's head straight, a third its tongue to the right side, he can easily put down its throat an egg-shell full of tar, and in ten minutes relief will usually take place; but a second dose has never failed with my cattle, which are always kept at a brisk walking pace through the yard until relieved.—*Dublin Farmers' Gazette.*

Lambing extraordinary.—A Scotch ewe, the property of Mr. Thomas Petty, farmer, Thorp, near Skipton, did on the 7th ult., lamb the extraordinary number of *six* lambs, two of which, with the mother, are doing well. The above ewe was bred by Mr. Wm. Alexander, on the head of the water of Keir, Gallowayshire, and was sold to the above-named gentleman by Mr. D. Johnson in last October.

Curious Duck.—Mr. James Hathway, near Wolton Bassett, has a most amusing natural curiosity. A few days since a duck hatched a brood, consisting of sixteen ducklings, one of which has two bills, four wings, four legs, two tails, and one body. It is living and thriving.

Economy of Bees.—The most perfect illustration of the habits and domestic economy of the honey or garden bee, was afforded to us on Saturday last, in the grounds of Mr. Thomas Gilbert, of Lutterworth, and a more interesting sight we have never before witnessed. Mr. G. had had a number of hives constructed upon different principles, so as to enable the spectator to view the whole process of the manufacture of the comb, the secretion of the honey, and the *larvæ*, from which springs the young bees. Some idea of the advantage derived from the management adopted by Mr. Gilbert, may be formed, when we state that a bell glass hive 9½ inches by 8½ inches, has produced in three weeks 14½ pounds of honey; and in an observatory hive, having four angles, 9½ by 11 inches each, the bees have, in the course of four weeks, collected no less than 19 pounds of honey.—*Leicestershire Mercury.*

Editor's Table.

History, Character, and Value of Guano, published by request of the Farmers' Club, by D. P. Gardner, M. D., consulting chemist of the Club. This pamphlet contains much curious and valuable information on the subject of guano, large quantities of which are arriving at our ports. It is well known that the article differs considerably in value, making tests necessary for the determination of the good guano. These Dr. Gardner has given in addition to other valuable matter, and we can only say that the Farmers' Club, by a request for its publication, has expressed its good opinion in favor of the merits of the performance.

The Agriculturist Almanac for 1845: edited and illustrated by Charles Foster: published by Cameron and Fall, Nashville, Tenn. A pretty little work, handsomely embellished, and replete with valuable matter to the farmer.

The Carolina Planter, a handsome octavo, with double columns and 24 pages monthly: published by J. C. Morgan, at Columbia, S. C.—price FIFTY CENTS. We have just received No. 1, of Vol. I. of this periodical, and although it is made up principally by selections from other journals, it promises to be an excellent coadjutor in the field of agriculture, and we wish it much patronage; which, from its very low price, we think it can not fail to receive. We are sorry to observe, however, that it should be guilty in its first issue of the culpable carelessness of copying a long article from our June No. without the slightest acknowledgment.

This makes the fifth fifty cent paper now established in the United States, and we expect to have the pleasure of recording some five or ten more at the commencement of a new year. Seeing that the world is now determined on this, we especially commend the plan to our western brethren. With such works, or even cheaper ones, they will be able to do incalculable good, and get hundreds of subscribers where they now have one. Where has our spirited and elegant little TWENTY-FIVE CENT friend, the Plow Boy, published at Cincinnati, kept himself lately? He promised to continue on the track *one* year at least; but we have seen nothing of him for some time. Bring up your rear, my dear boy, and let us have a regular monthly sight of your curious and quite original phiz. We are social men here, in the great city of Gotham, and like to make our races in a crowd—and be assured that we think little of the sport of scampering over the track all alone.

Report of the Commencement and Progress of the Agricultural Survey of South Carolina, for 1843, by Edmund Ruffin; in which is an account given of Marl Beds, Calcareous Deposites, the Primitive Limestone Belt, Swamp Lands and their Drainage and Embankment, the Granitic Region, and a cursory view of the Agriculture of the State, embracing a particular account of the culture of Rice, &c., &c., embodied in a close printed octavo pamphlet of 177 pages, all of which Mr. Ruffin has treated with his accustomed thoroughness and ability. This forms an excellent sequel to his celebrated work on Calcareous Manures in Virginia, and shows, conclusively, that South Carolina has inexhaustible elements within herself of renovating her worn-out lands, and bringing such as are naturally barren into a high state of fertility. It is astonishing that the ignorance, prejudices, and niggardliness of a few, should have conspired to put an end to the survey of Mr. Ruffin; but such, we learn, is the fact, notwithstanding he has already discovered hidden wealth enough in the State, if judiciously employed, to pay the expense of his *reconnaissance* a hundred thousand times over. We hope the day is not distant when better and more enlightened counsels will prevail, and that Mr. Ruffin may be engaged to finish the work so well begun.

We wrote the above three months ago, but it was laid over through mistake to the present time.

An Elementary Arithmetic, designed for academies and schools; also serving as an introduction to the higher Arithmetic. By Geo. R. Perkins, A. M.; 18mo, pp. 264—price 31 *cts.* There is an originality about this work which is rarely found in our school arithmetics. To those already acquainted with our author's higher Arithmetic, and Algebra, it is unnecessary to say that his illustrations and operations are clear and concise, well calculated to lead the pupil from the simplest principles up to the more difficult ones by easy gradations. Our author claims to have made some improvements. He informs us that he has been careful to treat of Decimal Fractions before introducing Federal Money. This is as it should be, since cents and mills are but decimals of a dollar, and require not to be treated as distinct denominate numbers. We are also happy to find introduced into this work, the concise and beautiful method of extracting the cube root, which has been deduced from Mr. Horner's method of solving algebraic equations of the third degree. We hope the work will meet that encouragement which its merits claim. For sale by Saxton and Miles, 205 Broadway.

Credit Quotations.—We observe that our spirited coadjutor of the Prairie Farmer has at length taken up this subject, and lays claim to certain articles walking about like a ripe *cabbage*, under other folks' great coats. My dear fellow, put it on *thick*, and we will back you. It is about time that this *corning* it from a neighbor's crib, and then charging the blame of the thing on the printer's "devil," at the same time that the only "devil" in the matter was the editor's own carelessness or cupidity was put an end to—it has passed muster with the craft now about long enough.

Show, not Fair. Another good idea. The Prairie Farmer uses the proper word Show and not Fair, in speaking of Agricultural Society meetings. Really you are the cleverest fellow we know, and the most improving. We have now some hope of a reform in this word, seeing that we have at length obtained such backing.

Transplanting Fruit Trees.—Mr. Lovett, of Beverly, Mass., plants his fruit trees between the 20th of August and last of September—immediately after the summer drought, when the summer growth of wood has ripened. He cuts off all the leaves before removing, with a pair of sharp scissors, and then, in the morning of a clear day, raises the tree, and places the roots in a tub of soap suds till the afternoon, then replants it. He also grafts in Autumn (he does not mention at what time), for fruit for the next year.—*Hovey's Mag.*

Great Yield of Wool.—Mr. Luther Smith, of Springfield, Mass., recently brought into that town from the east, a lot of Spanish Merino sheep, from one of which he sheared fourteen pounds, and from three others, thirty-three pounds ten ounces of wool, being of one year's growth.

Spruce Beer.—Cold water, ten gallons; boiling do., eleven gallons. Mix in a barrel, and add thirty pounds of molasses, and one ounce or more of essence of spruce. Add one pint of yeast. Bottle in two or three days.

We have seen the above paragraphs in a dozen or more exchange papers, and do not know to which to give credit.

Agricultural Publications.—As a consequence of the low prices, (speaking of agricultural products throughout the west,) we found a very considerable decrease of interest in agricultural publications. There are a great many who have not lost their interest, and some are awaking to a new interest in this behalf—but we found large numbers who had formerly been subscribers to an agricultural journal, but who did not now take any—alleging that there was no money to be had—that without knowing anything more about farming, they could raise sufficient to eat and clothe themselves; and if they raised more, it would sell for nothing—that they farmed to live, and when they began to farm to make money, they would take a paper. In travelling about six hundred miles, we did not find, from frequent inquiry, more than two agricultural papers beside our own, and in one county not a single copy of any sort.—*Prairie Farmer.*

It really strikes one with melancholy to read the above paragraph. What, wait till you can "make money" before you will instruct yourselves? Shame on such a principle. Pray, will you *wait* till your children can "make money" before you send them to school? If you do they will get precious little instruction in this world. But we are not willing to let the argument rest here, and will answer that the agricultural journals, by teaching you an improved system of farming, will also better instruct you how to "make money," than any other means you can possibly devise for acquiring it.

Sea-weed a Preventive of the Curculio.—The Magazine of Horticulture says, that sea-weed spread round plum trees as far as the branches extend, have prevented injury to them by the curculio.

Farming to some purpose.—Mr. Adam Anthony, of North Providence, during the month of April, sent to market *eight tons two hundred and fifty-six pounds of milk*, the produce of twenty-seven cows. The average quantity of milk which each cow gave daily, was eight quarts and three gills. The last item appears to us to be an important one to farmers, as it shows how much milk may be expected, on an average, from such a number of cows. Mr. Anthony keeps his cows in beef order, and sells them for beef as soon as their milk begins to fail. During the months of May and June, Mr. Anthony sent to market seven tons and a half of milk each month.—*Providence Chron.*

Great Butter Qualities of a Grade Devon.—Mr. Wm. Bellows, of Walpole, N. H., states in the Mass. Ploughman, that he has a grade Devon cow, whose milk from June 17th to 24th (from fourteen milkings), made 16 lbs. 10 oz. of choice butter. Her milk churns remarkably quick, never requiring over ten minutes, and frequently coming in one half or one third of this time. Her only feed was grass pasture.

Refusal to credit Extracts.—When we saw the article in the North Arkansas of July 3d, extenuating its conduct in copying articles from this paper without giving credit, we thought in *general justice to ourselves*, we should reply to it at length; but on further consideration, its course is so palpably unjust, and so directly contrary to the rule of all respectable papers, that we think it entirely unnecessary, and shall be contented by giving instead, the example of Dr. Philips, one of the editors of the South Western Farmer. Dr. P. wrote originally for the American Agriculturist, a series of Southern Calendars, a good share of which was afterward incorporated for us, by another person, into a more general Southern Calendar, published last year in an almanac, and now monthly in this periodical. If any person then had a free right to the use of these, it would be Dr. Philips. But does he seize upon them after a mere general announcement in his paper that he intends doing so, and monthly order their insertion without giving us credit? No, indeed. So conscientious is he in this particular, that he asks our permission to publish them before doing so, and then scrupulously gives credit every time they appear. Now he was perfectly welcome to make just such use of the calendars as he pleased, and it surprised us that he should ask leave at all in the matter; but it showed that he was determined upon being punctiliously honorable in this point. We are certainly very much obliged to the North Arkansas, as well as to all other papers for what they have so kindly said in our behalf, and were our situations reversed, we should have most gladly done the same thing for them; but all this can not justify taking articles on a general announcement, and refuse afterward to give credit for the same. To show the injustice to us of such a proceeding, we have repeatedly seen the same articles taken from the Agriculturist, credited by other papers to the North Arkansas; so that however well informed its *subscribers* may be on this subject, its *exchanges* seem to be ignorant thereof. If our paper has not been regularly received by the Arkansas, the Post-office is to blame, and not we—it has been regularly mailed it from our office. But to conclude the whole matter, and put an end to all cause of complaint, forward us the amount of the six dollar subscriptions talked about, and you shall have our first two volumes handsomely bound, sent gratis to your address by the first conveyance indicated. All we ask is justice.

☞ *Forgetfulness.*—The following regular agricultural papers have taken the subjoined articles from us and omitted giving credit. We shall expect their first issues after reception of this No. will contain a correction, sent to us done up outside, and marked with ink lines.

American Farmer, No. 13, p. 102—"Plaster no Longer Beneficial."

Farmers' Cabinet, No. 1, p. 36—"Pigs Sucking a Cow," is credited to the Christian Intelligencer instead of this paper.

N. Y. Farmer and Mechanic, No. 3, p. 47—"To kill Lice on Cattle."

Carolina Planter, No. 1, p. 18—"The Cow Pea, Peach, &c."

Southern Cultivator, No. 15, p. 119—"Pigs Sucking a Cow," it credits to the American Farmer.

Conn. Far. Gaz., No. 20, p. 310—"Value of Urine."
" " p. 319—"A Sheep Trough."
" " p. 319—"Sources of Ammonia."

To drive away Rats.—Sprinkle unslacked lime in their holes, and about where they congregate, and they will depart without fail.

TO CORRESPONDENTS.—W. D., S. B. Parsons, A Traveller, T. Affleck, L. F. Allen, and Canadian Naturalist, will appear in our next.

Deer in Parks.—The gentleman addressing us on this subject shall be answered in our October No. We have often kept them.

ACKNOWLEDGEMENTS.—To Benjamin Hodge, for a catalogue of trees, shrubs, &c., cultivated in his nursery and garden at Buffalo. To the secretaries of several agricultural and horticultural societies, for programmes of their forthcoming shows, the time of holding of which we have given under their proper head. We are surprised that we do not get more of these, and unless sent to us in good time, *marked*, it can not be expected that we should notice them. An editor generally has too much pressing upon him to give sufficient leisure to look out such things in his exchanges—they must be brought directly to his eye or they are most likely to pass unnoticed.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, AUGUST 26, 1844.

ASHES, Pots,	per 100 lbs.	$4 18	to	$4 25
Pearls,	do.	4 50	"	4 56
BACON SIDES, Smoked,	per lb.	3½	"	4½
In pickle	do.	3	"	4
BALE ROPE	do.	6	"	9
BARK, Quercitron	per ton	24 00	"	24 50
BARLEY	per bush.	56	"	57
BEANS, White	do.	1 25	"	1 75
BEEF, Mess	per bbl.	5 00	"	7 00
Prime	do.	3 00	"	5 00
Smoked	per lb.	5	"	7
Rounds, in pickle	do.	3	"	5
BEESWAX, Am. Yellow	do.	28	"	31
BOLT ROPE	do.	12	"	13
BRISTLES, American	do.	25	"	65
BUTTER, Table	do.	12	"	15
Shipping	do.	8	"	12
CANDLES, Mould, Tallow	do.	9	"	12
Sperm	do.	28	"	38
Stearic	do.	20	"	25
CHEESE	do.	3	"	7
CIDER BRANDY, Eastern	per gal.	42	"	44
Western	do.	35	"	40
CLOVER SEED	per lb.	7	"	8
COAL, Anthracite	2000 lbs.	4 50	"	5 50
Sidney and Pictou	per chal.	6 75	"	7 00
CORDAGE, American	per lb.	11	"	12
CORN, Northern	per bush.	49	"	50
Southern	do.	46	"	48
COTTON	per lb.	5	"	10
COTTON BAGGING, Amer. hemp	per yard.	16	"	18
American Flax	do.	16	"	17
FEATHERS	per lb.	30	"	35
FLAX, American	do.	8	"	8½
FLAX SEED, rough	per 7 bush.	9 00	"	9 75
clean	do.	10 00	"	10 50
FLOUR, Northern and Western	per bbl.	4 12	"	4 50
Fancy	do.	4 75	"	5 25
Southern	per bbl.	4 12	"	4 50
Richmond City Mills	do.	5 50	"	5 75
Rye	do.	2 75	"	3 12
HAMS, Smoked	per lb.	5	"	10
Pickled	do.	4	"	7
HAY	per 100 lbs.	40	"	50
HIDES, Dry Southern	per lb.	9	"	11
HEMP, Russia, clean	per ton.	175 00	"	180 00
American, water-rotted	do.	140 00	"	180 00
do dew-rotted	do.	90 00	"	140 00
HOPS	per lb.	7	"	9
HORNS	per 100	1 25	"	5 00
LARD	per lb.	5½	"	6½
LEAD	do.	3½	"	4
Sheet and bar	do.	4	"	4½
MEAL, Corn	per bbl.	2 44	"	2 62
Corn	per hhd.	11 75	"	12 00
MOLASSES, New Orleans	per gal.	28	"	31
MUSTARD, American	per lb.	16	"	31
OATS, Northern	per bush.	28	"	30
Southern	do.	24	"	25
OIL, Linseed, American	per gal.	73	"	75
Castor	do.	80	"	85
Lard	do.	55	"	60
OIL CAKE	per 100 lbs.	1 00	"	— —
PEAS, Field.	per bush.	1 25	"	— —
PITCH	per bbl.	1 00	"	1 12
PLASTER OF PARIS	per ton.	2 12	"	2 25
Ground, in bbls. of 350 lbs	per cwt.	1 12	"	— —
PORK, Mess	per bbl.	8 25	"	10 00
Prime	do.	6 50	"	8 12
RICE	per 100 lbs.	3 00	"	3 50
ROSIN	per bbl.	58	"	75
RYE	per bush.	65	"	66
SALT	per sack	1 31	"	1 50
SHOULDERS, Smoked	per lb.	4	"	6
Pickled	do.	3	"	4
SPIRITS TURPENTINE, Southern	per gal.	28	"	29
SUGAR, New Orleans	per lb.	5	"	8
SUMAC, American	per ton	25 00	"	27 50
TALLOW	per lb.	6	"	7½
TAR	per bbl.	1 56	"	1 69
TIMOTHY SEED	per 7 bush.	11 00	"	13 00
TOBACCO	per lb.	2½	"	6½
TURPENTINE	per bbl.	2 25	"	2 62
WHEAT, Western	per bush.	88	"	91
Southern	do.	83	"	85
WHISKEY, American	per gal.	23	"	25
WOOL, Saxony	per lb.	50	"	65
Merino	do.	40	"	50
Half-blood	do.	35	"	40
Common	do.	25	"	30

New York Cattle Market—Aug. 26.

At market, 900 Beef Cattle, 140 Cows and Calves, and 3000 Sheep and Lambs.

PRICES.—*Beef Cattle*—The market last week was rather more spirited than the week preceding, without, however, any advance in prices. We resume our former quotations, $4.25 for inferior, and $5 *a* 5.50 for prime qualities. About 200 left over.

Cows and Calves.—All at market sold, at $13 *a* 25.

Sheep and Lambs.—Sheep $1.37 *a* $4; Lambs $1 *a* $3, a slight advance—all sold.

—

REMARKS.—*Ashes* are in fair request. *Cotton*—directly after the arrival of the Acadia, holders were more firm for a few days, but are now ready to sell at a slight reduction. Export from the United States since 1st September last, 1,602,619 bales; same time last year, 2,000,769; same time year before, 1,454,296. *Flour* and *Meal* are steady. *Grain* of all kinds brisk. *Hay* more in demand. *Hemp* the same. *Molasses* quite firm. *Naval Stores* improving. *Provisions*, with the exception of Beef, more inquired after. *Rice* has advanced and is brisk of sale. *Seeds*, especially Timothy, have an upward tendency. *Tobacco* in fair request. *Wool* is firm and prices rather on the rise, the finer grades especially.

Money continues at 5 to 6 per cent. on paper, and 6 to 7 per cent. on bond and mortgage.

Stocks. Not much has been done the past month, as many of our monied men are absent from the city during August. All those of a good kind are held firm.

Business generally is very active, and the daily transactions large.

The weather has been showery during the past month; but upon the whole, may be considered as favorable, especially to the grass. Roots and late Oats have suffered some from an excess of moisture. The Corn is looking well generally; the stalks have a good growth, and the ears are abundant and well filled. Rice, Cotton, Sugar, Hemp, and Tobacco, are ripening uncommonly early, and promise to be heavy crops. The former is already nearly harvested. The summer, taking everything into consideration, has been highly favorable; and with the exception of the disastrous floods South and West, there have been few losses. The growth of crops has been very rapid, and as far as secured they have proved more than an average yield.

ICHABOE GUANO.

The subscribers have received by a late arrival from Liverpool, a few hundred weight of this superior guano, pure as imported from Africa, being taken direct out of the ship Clydesdale, arrived at Liverpool docks. A writer in the London Gardener's Gazette, June 8, 1844, remarks: "The competition for this guano in the colonial market was so great, that two cargoes were sold in about twenty minutes. The desire for Ichaboe guano has arisen from the fact that all the eminent chemists who have analyzed it, found it to possess the fertilizing properties in the highest degree: and the result of its application by practical agriculturists have proved the correctness of their analysis. This island (Ichaboe) on the western coast of Africa, which three years since was unknown, is about a mile and a half in circumference, and is deeply covered with guano, the deposite of sea-birds that have for ages remained undisturbed in their possession."

Price $6 per hundred pounds, or $1 for 16 pounds, (which is sufficient for 40 gallons of water,) put up in neat boxes; also 7 lb. boxes for 50 cents. It should be applied in a liquid state, and immediately after a rain. A liberal watering with this liquid once a fortnight is sufficient for vegetables, Indian corn, potatoes and turneps, and once a week for flowers in pots, and dahlias, tuberoses, and chrysathemums.

Also, the best of Artificial Guano, made from an exact analysis of the real, in boxes of 20 lbs., at $1 per box; or 10 lbs. for 50 cts.

3t. J. M. THORBURN & CO., 15 John st.

PREMIUM EAGLE, SUBSOIL, AND OTHER PLOWS.

The subscriber having been appointed agent in this city for the sale of the celebrated Premium Plows, made by Ruggles, Nourse, & Mason, of Worcester, Massachusetts, now offers them at the manufacturers' home prices. They are calculated alike for the northern farmer and southern planter, and embrace every variety, Cotton and Rice plow, Stubble, Sod, Road, and Subsoil. Prices from $3,50 to $15,00, according to the kind.

The great number of premiums which these plows have obtained at the most important plowing-matches, and the universal satisfaction they have given wherever introduced, render it unnecessary to particularise their merits. They are made of the best materials, are highly finished, and combine light weight and easy draught, with great strength and durability.

A. B. ALLEN, 205 Broadway, N. Y.

WOBURN HOGS.

For sale, a few of the celebrated Woburn or Bedford breed of Hogs, comfortably caged and delivered in New York at the following prices, viz: One Boar eleven months old, $25; three Boars, five months old, $17 each; four Sows five months old, $15 each; a few pair of spring Pigs, $25, delivered 1st of June next. Address the subscriber at New Haven, Ct. WM. K. TOWNSEND.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 miles, without the State.

ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume I. and II. of THE AMERICAN AGRICULTURIST, with tables of contents complete, for sale at $1,00 each; elegantly bound in cloth, $1,25. These are handsome, tasteful books, and make very desirable premiums for distribution with Agricultural Societies, and should also find place in all our District School Libraries. They constitute the best and most complete treatise on American farming, stock-breeding, and horticulture, extant. When several copies are ordered, a liberal discount will be made.

Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway. New York.

LINNÆAN BOTANIC GARDEN AND NURSERY—Late PRINCE'S.

FLUSHING, L. I., NEAR NEW YORK.

The new Descriptive and unrivalled Catalogue, not only of FRUIT, but also of ORNAMENTAL TREES, SHRUBS, and PLANTS, cultivated and for sale, *at reduced prices*, at this ancient and celebrated Nursery, (*the* IDENTICAL *premises known as* PRINCE'S, *and by the above title for nearly fifty years*,)

☞ **With directions for their Culture,**

may be had *gratis* on application by mail, *post paid*, to the NEW PROPRIETORS, who will endeavor to merit the CONFIDENCE and PATRONAGE of the Public, by INTEGRITY and LIBERALITY in dealing, and MODERATION in charges.

WINTER & Co., Proprietors.

Flushing, Aug. 31, 1844.

BEMENT'S AMERICAN HOTEL,

No. 100 STATE STREET, ALBANY,

Is now open for the reception of company, having undergone a thorough repair and complete renovation from the cellar to the attic. It has been newly furnished throughout, and in quality of beds, cleanliness, and airy rooms, will now compare with any other establishment in the city.

In location, this house has many advantages, being situated in the centre, and on one of the most beautiful streets in the city; within a few moments' walk of the Eastern and Western Railroad Depots and the landing of the Steamboats; about midway between the Capitol, Public Offices and the Banks, Post-Office, and the business parts of the city; rendering it very convenient for the man of business, as well as the gentleman of leisure.

The subscriber places much reliance on the countenance and support of the AGRICULTURISTS throughout the Union, who may visit the city, and pledges himself to spare no exertions to render their stay agreeable, should they favor him with their company.

Three Hills Farm will be carried on as usual, under my own superintendance, by a careful manager, and the breeding and rearing of improved stock will be continued as heretofore.

C. N. BEMENT.

Albany, June, 1844.

AGRICULTURAL AND BUSINESS AGENCY.

Knowing the convenience that such an agency will be to his distant friends, the subscriber offers his services for the purchase of Wagons, Carriages, Match and Single Horses, Cattle, Sheep, Swine, Agricultural Books and Implements, Seeds and Merchandise of any kind; also, the buying and selling of land, the payment of taxes, &c., &c.

From his long experience as a farmer and stock-breeder, and general acquaintance with lands and merchandise, the subscriber trusts that he shall be able to give general satisfaction. The commission charged for his services in purchasing or selling, will be moderate. Cash or produce must invariably be in hand before orders can be executed.

A. B. ALLEN, 205 Broadway, New York.

IMPROVED WHITE FLINT WHEAT.

The subscriber has just received a lot of this very superior Seed Wheat, direct from the grower, R. Harmon, jr. Price $6 per bbl. of a little over three bushels.

A. B. ALLEN,
205 Broadway.

VALUABLE NEW WORKS

JUST IMPORTED.

Stephens' Book of the Farm, No. 18, with engravings,	$1,50
*** One more Part wll complete the work.	
Sproule's Elements of Practical Agriculture, new edition,	4,00
Catalogue of the Fruits of the Horticultural Society,	1,50
Moore, on the Cultivation of the Cucumber,	1,50
Johnson, on Fertilizers. Second edition, greatly enlarged,	4,75
The Dog Fancier's Guide—with many engravings,	0,31
The Book of Hardy Flowers; 1 vol., colored,	2,50
Le Maout, Elemens de Botanique, 2 vols., 8vo,	4,50
Le Bon Jardinier, 1 very thick vol., 8vo, with engravings,	2,00
Kollar's Treatise on Insects Injurious to Gardeners,	1,25
Roper, on the Nature and Management of the Horse,	0,87
Towne's Prize Essay on Chemistry, 1 vol.,	0,50
Porter, on the Nature and Properties of the Sugar Cane,	3,00

Imported and for sale by

WILEY & PUTNAM, 161 Broadway.

☞ Single copies of books imported to order, per steamer, and a return of the same received in six weeks.

BERKSHIRE PIGS FOR SALE.

Having made use of his present stock for several years, and wishing to take a fresh cross, the subscriber will dispose of three of his splendid Berkshire breeding sows, at the very low prices of $25 to $30 each. These animals are of good size, fine form, and descended from the best blood imported into the United States. Also, two superb Woburns at the same price.

Berkshire and Woburn pigs, 3 months old, caged and delivered on ship-board at the city of New York, for sale at $25 per pair.

Address CHARLES STARR, JR.
Mendham, Morris Co., N. J.

GREAT SALE OF ELECTORAL SAXON SHEEP.

The undersigned will sell at vendue, the two flocks of *pure Electoral Saxon Sheep*, belonging to the estate of the late Henry D. Grove, as follows: 1st. That at Granger, Medina county, Ohio, consisting of about 400 sheep, on the 30th Sept., next, on the farm now occupied by them. 2d. The home flock, at his late residence in Hoosick, Rensselaer county, N. Y., consisting of about 350 sheep, on the 15th Oct., next. A rare opportunity is offered to those who may be anxious to improve the quality of their flocks. The following is the opinion of the distinguished manufacturer who has usually purchased Mr. Grove's wool, of the character of these flocks:—

"The purest blood in this country was introduced by the late Mr. Grove in his own flocks, the wool of which I have been familiar with since their importation in 1827. In point of fineness and admirable *felting* qualties, this wool is unsurpassed by any flock in this country, and the fleeces average about half a pound each more than any other I am acquainted with."

SAMUEL LAWRENCE.

Lowell, April 9, 1844.

The terms of the sales will be cash. Reference, Samuel Lawrence, Lowell, Mass., or the subscribers.

ELIZA W. GROVE,
W. JOSLIN,
S. A. COOK. } Administrators.

Buskirk's Bridge, N. Y., April 20, 1844.

CONTENTS OF SEPTEMBER NUMBER.

Page.
Root Crops,
Exportation of Hemp, 257
Farm of Mr. Pell, 258
Wheat and Rye,
Increase of Agricultural Exports, 260
Villas, 261
Remedy for Overeating Apples,
Great Sale of Electoral Saxon Sheep,
Agriculture in Scotland, No. 1, John P. Norton, 262
Paular Merino Sheep, Henry S. Randall, 264
Egyptian Corn, Robert W. Williams, 265
Culture of Tobacco, No. 4, D. P. Gardner, 266
Wool for Europe, 267
Electoral Saxony Sheep, S. A. Cook, 268
Paular Merinos, No. 6, Examiner, 269
Culture of Silk, D. Stebbins, 272
Hay Rigging, Charles Starr, Jr., 273
New York Agricultural Institute, D. P. Gardner,
Making Cheese, Huldah Andrews & Sons, 274
Address of the N. Y. Farmers' Club,
Northern Calendar for September, 275
Southern do " do 276
Ag. and Hort. Show and Fair of the American Institute, 277
Annual Show and Fair of the N. Y. State Ag. Society, 281
Foreign Agricultural News, 283
Editor's Table, 285
Review of the Market, 287

THE
AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. III. NEW YORK, OCTOBER, 1844. NO. X.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

SAVING SEEDS.

October is the month in which most of the garden seeds, and some of those of the field crops ripen; due attention, therefore, must be paid to gathering and preserving them. We think there is too often great carelessness displayed in selecting for planting; the husbandman does not bear in mind the oft-repeated adage that *like produces like*, but seems to think that anything will do. With the unreflecting, *a seed is a seed* whether good or bad; and strange to say, that many either consume or sell the *good* and reserve the *bad* for planting, thinking this the best economy! Let such be assured, that by sowing bad or indifferent seed, they must expect a poor crop in return: we know but one exception to this general rule, and this is by no means fully proved to our mind—we allude to small, unripe potatoes, which a late writer in England contends produce the best crops, especially where disease is to be apprehended. The great improvements in seed and root crops, as well as domestic animals, have been made by carefully choosing the best for propagation, aided, of course, by a superior system of feed and culture. It behooves the farmer, therefore, to bear these facts steadily in mind, and in all cases use sound and discriminating judgment in selecting such seeds and roots as will be certain to produce the best and most abundant crops.

MAKING VINEGAR.

So far as our observation and information extend, this is one of the most abundant fruit years that we have had for a long time, and as is often the case, it may be followed by an untoward season, in which the greater part of the fruit may be cut off. Making cider for drink is happily nearly abandoned throughout the country, but for vinegar, we think that it is quite too much neglected; the consequence is, that under the name of vinegar, we have the vilest trash and compounds which can be conceived of, palmed upon the community for this highly necessary preservative and agreeable condiment. Vinegar from well made, unadulterated apple cider, is not only the cleanest and purest in our judgment which is manufactured, but it is also more highly prized and more surely depended upon by the good housewife. Let every farmer then reserve a sufficient store of cider for it the present season. He should always have a two years' stock on hand, and in abundant fruit seasons he ought to provide for three years ahead, as it is easily kept and subject to considerable fluctuation in price, of which he will then be able to take advantage in selling when the market affords him a good profit.

Vinegar from pure good cider is made in the easiest possible manner, as the latter substance will change into it with little trouble, and keep well even in a cool cellar. Some prefer an open shed for making this change. Exposed to the sun any great length of time the casks will leak more or less; some evaporation also takes place, and the consequence is, considerable loss. After the cider has well worked, the liquor should be partly drawn off, leaving the casks only about two thirds filled. For the purpose of admitting the air, the bunghole must still be kept open, and to prevent insects or vermin of any kind getting in, a square piece of fine wire gauze, or if that is not at hand, a strong piece of linen cloth should be nailed over it. To hasten the souring or rather ripening of vinegar, shake it frequently, and if necessary, place a cask of it for a short time in the sun. In this case, we have generally used a long neck bottle to stop the bung-hole instead of gauze. The neck is thrust into the cask, leaving the large part of the bottle outside. This is pretty effectual in keeping out the vermin, and also the rain, which the gauze will not, and we think that the heat drawn from the sun by the bottle hastens the ripening of the vinegar.

INCUBATION.

In our August No. we promised to follow up the article on the "Egg Hatcher," by another, derived entirely from the pamphlet of Mr. Mickles, on the progress of incubation in the egg of the common fowl. All these changes we had the pleasure of examining, and they may be seen any day at 205 Broadway at the trifling cost of a shilling. We earnestly recommend our readers to become a witness of these curious workings of nature.

In an impregnated egg, previous to the commencement of incubation, a small spot is discernible upon the yolk, composed apparently of a membraneous sac or bag, containing a fluid matter, in which swims the embryo of the future chick, and seemingly connected with other vesicles around it.

1st Day. In a few hours after exposure to the proper temperature, the microscope discovers that a humid matter has formed within the limits of the embryo. At the expiration of twelve or fourteen hours, this matter bears some resemblance to the shape of a little head; a number of new vesicles also successively appear, foreshadowing the different parts of the future body of the chick; those first formed, and most easily distinguished, may afterward be recognised as assuming the shape of the vertebral bones of the back.

2d Day. The eyes begin to make their appearance about the 30th hour, and additional vessels, closely joined together, indicate the situation of the navel. The brain and spinal marrow, rudiments of the wings, and principal muscles, become observable. The formation of the head is also evidently proceeding.

3d Day. The beating of the heart is perceptible, although no blood is visible; after a few hours, however, two vesicles, containing blood, make their appearance. One forming the left ventricle, the other the great artery. The auricle of the heart is next seen, and, in the whole, pulsation is evident.

4th Day. The wings now assume a more defined shape, and the increased size of the head renders the globules containing the brain, the beak and the front and hind part of the head, distinctly visible.

5th Day. The liver makes its appearance, and both auricles, now plainly seen, approach nearer the heart than before. That splendid phenomenon, the circulation of the blood, is now evident.

6th Day. The lungs and stomach are distinguishable, and the full gush of blood from the heart is distinctly apparent.

7th Day. The intestines, veins, and upper mandible become visible, and the brain begins to assume a distinct form.

8th Day. The beak for the first time opens, and the formation of flesh upon the breast commences.

9th Day. The deposition of matter forming the ribs takes place, and the gall bladder is perceptible.

10th Day. The bile is distinguishable by its green color, and the first voluntary motion of the body of the chick is seen, if separated from its integuments.

11th Day. The matter forming the skull now becomes cartilaginous, and the protrusion of feathers may be noticed.

12th Day. The orbits of sight are apparent, and the ribs are perfected.

13th Day. The spleen gradually approaches to its proper position in the stomach.

14th Day. The lungs become enclosed within the breast.

15th, 16th, and 17th Days. During these days, the infinity of phenomena in this wonderful piece of vital mechanism elaborate it into more perfect form, and it presents an appearance closely approaching the mature state. The yolk of the egg, however, from which it derives its nourishment, is still outside the body.

18th Day. On the eighteenth day, the outward and audible sign of developed life is apparent, by the faint piping of the chick being, for the first time, heard.

19th, 20th, and 21st Days. Continually increasing in size and strength, the remainder of the yolk gradually becomes enclosed within its body; then, with uncommon power, for so small and frail a being, it liberates itself from its prison in a peculiar and curious manner, by repeated efforts made with its bill, seconded by muscular exertion with its limbs, and emerges into a new existence.

The position of the chicken in the shell, is such as to occupy the least possible space. The head, which is large and heavy in proportion to the rest of the body, is placed in front of the abdomen, with its beak under the right wing; the feet are gathered up like a bird trussed for the spit, yet in this singular manner, and apparently uncomfortable position, it is by no means cramped or confined, but performs all the necessary motions and efforts required for its liberation, with the most perfect ease, and that consummate skill which instinct renders almost infallible.

The chicken, at the time it breaks the shell, is *heavier* than the whole egg was at first.

An egg will not hatch *in vacuo.*

The infinite wisdom of the Great Architect of the animal frame is remarkably manifested in its providing the chick with a sharp and hard substance on the tip of the bill, by means of which it is enabled to fracture the shell to liberate itself from its imprisonment. Its own bill is too soft to enable it to break the shell therewith, and in two days or less this hard and pointed substance disappears, the young bird no longer requiring to use it.

Equally extraordinary and wonderful is the fact that the germ of the chick is provided with the ability to keep itself always on the top of the yolk of the egg, to the end that it may take the heat from the parent bird when setting, to produce incubation.

HONEY DEW.

"At a late meeting of the Farmers' Club at New York, the subject under consideration being 'Insects injurious to Vegetation,' the Chairman, Gen. Johnson of Long Island, is reported to have said, 'It is my opinion that the dew (called by the Dutch, honey dew) which *always* falls in the latter part of June, *always* kills off most insects; they *uniformly* disappear after it has fallen.' Now, since I have embraced the new doctrine of cause and effect in the matter of blight and its consequences, I am led to consider the honey-dew merely the extravasated juices of the plant or tree, which, having been for a time in a stagnant and putrid state occasioned by unfriendly atmospherical influence, are at length thrown off by a new circulation of the sap; the *effect* being, the deprivation of food to the insect tribe, which are created for the purpose of feeding on putricity; and hence the *cause* of their *uniform disappearance.*"

The above is a communication addressed by Mr. W. Fay to the Boston Cultivator. We have consulted Mr. Browne, who is well versed in matters of this kind, and he regards honey-dew, in most cases, as the exudation of plant-lice (*Aphides*). He says, however, that there are saccharine exudations from the leaves of plants and trees, which are not distinguished by the name of honey-dew, as the labdanum from the *cistis creticus*, and the manna which exudes from the ash of Italy and the larch of France. There are also analogous productions observable on plants after very dry weather, which Mr. Murray, in his Treatise on Atmospheric Electricity, ascribes to an electric change in the air. The latter gentleman states that the honey-dew was found on plants that were entirely free from plant-lice, and so copious was this substance, that had their number been a hundred fold, they could not certainly have been the source of the supply. He supposed that he set the question at rest by washing a leaf and wiping it dry with a sponge, immediately after which, he observed through a lens, that excreted globules were apparent; but in this experiment might not the leaf have been previously wounded, perhaps, by the beak of a plant-louse, and hence the exudation of sap instead of honey-dew? And may not the circumstance of his finding the honey-dew on leaves where there were no plant-lice, be accounted for on the principle that these insects had left, as they always do, the parts covered with their exudations? Mr. Sauvages, in the Transactions of the Royal Society of Montpellier, remarks that aphides (plant-lice) are careful to eject the honey-dew to a distance from the place where they may be feeding. And Mr. Browne cites an instance of a plant of the Chinese Chrysanthemum, the young shoots of which swarmed with aphides, and that the leaves below were covered with honey-dew. The experiment was tried, of wiping it off from a leaf, and no more was formed when it was protected by a piece of paper from the aphides above. Besides, the paper became sprinkled with honey-dew in a few hours, and by means of a lens, the aphides were actually seen to eject their fluid.

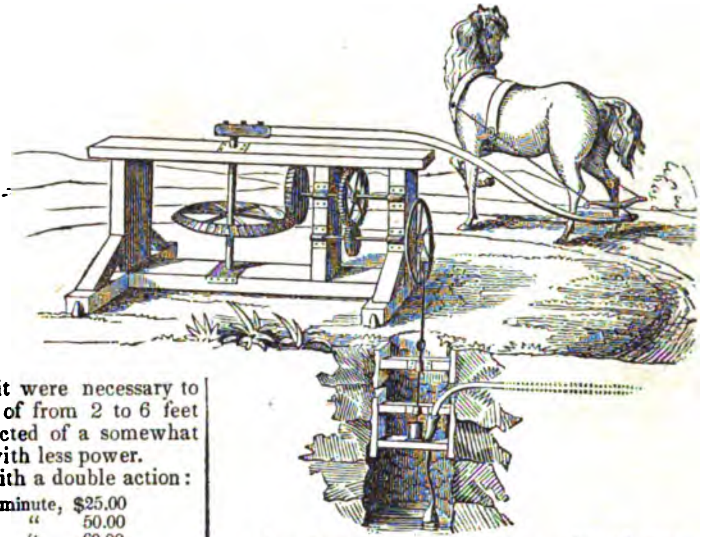
Dr. Harris, in his Report on the Insects of Massachusetts, describes the habits of these insects as follows: "Plant-lice seem to love society, and often herd together in dense masses, each one remaining fixed to the plant by means of its long tubular beak; and they rarely change their places till they have exhausted the part first attacked. The attitudes and manners of these little creatures are exceedingly amusing. When disturbed, like restiff horses they begin to kick and sprawl in the most ludicrous manner. They may be seen, at times, suspended by their beaks alone, and throwing up their legs as if in a high frolic, but too much engaged in sucking to withdraw their beaks. As they take in great quantities of sap, they would soon become gorged if they did not get rid of the superabundant fluid through the two little tubes or pores in the extremities of their bodies. When one of them gets running over full, it seems to communicate its uneasy sensations, by a kind of animal magnetism, to the whole flock, upon which they all, with one accord, jerk upward their bodies, and eject a shower of the honeyed fluid."

The fecundity of aphides is almost incalculable. Reaumur supposed that in one year there may be twenty generations, and he proved by experiment that one of these insects may be the parent of 5,904,900,000 descendents during its life! Latreille says one female, during the summer months, usuually produces about 25 a day; and more than 1,000 have been counted on a single leaf of a hop.

In regard to the remarks made by General Johnson, as quoted above, we should attribute the disappearance of most lepidopterous insects in the latter part of June, or beginning of July, to their passing from the larva or caterpillar to the pupa or chrysalis state. The honey-dew is in no way regarded as poisonous, but, on the contrary, it is devoured with eagerness by ants, bees, and other insects; and in the forests of Lithuania this substance and linden flowers afford the finest honey in the world. The above remarks are made, hoping that they will be the means of eliciting further information on this subject from those who are much more capable than ourselves of elucidating it.

LIFT AND FORCING PUMPS.—Fig. 57.

We have been so frequently solicited for information about pumps, and the application of horse power to them, that we give the annexed cut (the only one at our command) as an illustration. We presume the same horse power which is used to propel threshing machines, with slight alterations, may be made to answer for pumping. Wind or water power would be preferred, if it can be obtained at a reasonable cost. Below we annex the prices that pumps cost here. If it were necessary to raise the water to a height of from 2 to 6 feet only, pumps may be constructed of a somewhat different form, and to work with less power.



Lift and Forcing Pumps, with a double action:

2½ inches	raise 20 gals. per minute,	$25.00
4 "	" 50 " "	50.00
5 "	" 80 " "	60.00
6 "	" 150 " "	100.00
11 "	" 400 " "	200.00

Iron Lift Pumps, for Cisterns, single rods, $6; double rods, - - - - - - - - $6.50

Horse Powers, for small Pumps, complete for one horse, - - - - - - - - 75.00

" " " large " for one horse, 100.00

" " " " " for two horses 150.00

MARL.

We are glad to see that the attention of the south is turning to the inestimable treasures of marl found in such immense quantities throughout this region. The Agricultural Society of Black Oak, in St. John's Parish, S. C., states in their report, that last year, twenty-five plantations marled 1,113 acres of their land. This information we derive from the Southern Agriculturist (an excellent publication by the way), which also adds, that all experiments with marl which have been properly conducted, have resulted very beneficially, especially to the corn and cotton crops. To give our readers an idea of the high value of this substance, Mr. Ruffin asserts in his report of the survey of South Carolina, that the proportion of pure carbonate of lime in much the larger number of exposures of marl beds varies from 55 to 85 per cent., and that more of them rise above 90 than fall below 50 per cent.!

BUCKWHEAT.

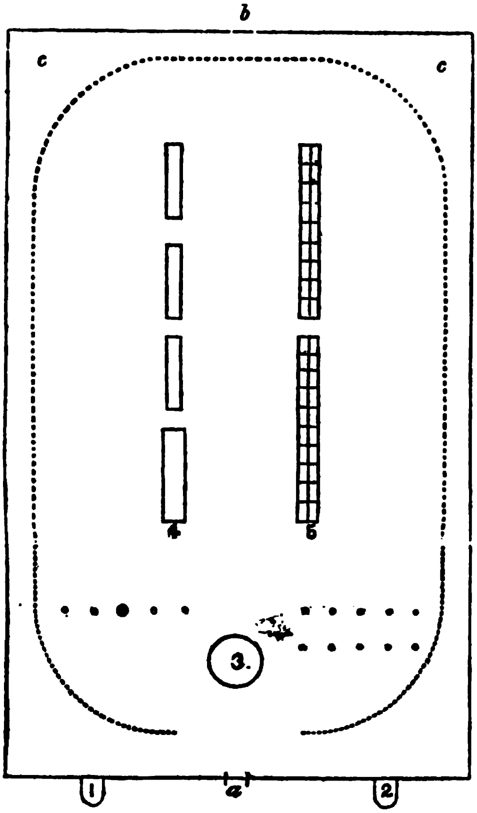
Great loss frequently ensues to the farmer in consequence of letting his buckwheat stand too long before cutting, especially if it happen to be struck with a severe frost. We well recollect one season having lost at least a third of our crop by the shelling of the grain during the process of harvesting; whereas, had we cut it one week sooner, we should have got quite as large a yield and been able to save all the seed. By cutting early, that is, as soon as the grain is slightly hardened, we also obtain a much superior quality of straw, of the value of which for feeding stock and the best method of stacking, we gave some account at page 193 of Vol. II. Mr. Baker, of New Jersey, made an excellent experiment last year in cutting buckwheat very early, for which we must refer the reader to the same volume as above, page 305. After cutting, he raked it up and bound it in bunches, and then let it stand to dry the straw and mature the grain, a full fortnight in the field previous to housing. Mr. B. gave us samples of the buckwheat thus cut and cured, which we still keep: they are among the finest specimens of this grain that we have ever seen. Such experiments are highly to be commended, and we wish our farmers would get more into the habit of making and recording them; they would thus confer not only a benefit on themselves, but on all who ever read or hear of an agricultural journal.

THE COMING WINTER.

We hear it foretold by our veteran farmers that the coming winter will be a tolerably severe one. They say they have never seen a season of great abundance, especially in fruit, that was not followed by a hard winter; the summer also has been rather wet than otherwise, and this may be set down as another sign for a cold winter. But be this all as it may, the farmer should provide well for the season of snow and frost, by saving all his straw; carefully curing and housing or stacking his corn stalks; and immediately harvesting and pitting any roots which may be left in the field. Straw and cornstalks, with a little bran or a few roots, will carry stock through the winter, if of a good breed, as well as the best of hay. Save all these, for there is nothing like having a little too much of everything on hand; no suffering comes from this cause, but from carelessness, or being too penurious to provide for the comfort and good condition of our domestic animals.

FOURTH ANNUAL SHOW
OF THE
NEW YORK STATE AGRICULTURAL SOCIETY.

THIS great event came off at Poughkeepsie on Tuesday, Wednesday, and Thursday, the 17th, 18th, and 19th of September; and was more numerously attended, and realized a much larger amount of funds to the Society, than any exhibition yet held. The show-ground enclosed about nine acres, half a mile southeast of the village, on a broad, smooth, rolling height of green sward, commanding one of the most magnificent views of mountain, river, hill, and dale, and broad cultivated plains, dotted with villages and farmeries, and clumps of shady forests, that can be found upon the banks of the noble Hudson.



SHOW GROUND.—FIG. 58.

We visited the ground three days previous to the commencement of the show, and found everything already prepared for it, by the indefatigable Committee of Arrangements of the citizens of Poughkeepsie, aided by the active exertions of Dr. Beekman, the President, and Mr. Henry O'Reilly, Secretary of the Society, and James S. Wadsworth, Esq. of Geneseo, who from having been President for the two preceding years, was enabled by his experience to be of great service in the general management and direction of affairs.

The above is not an exact sketch of the form of the show-ground, it being angling at the four corners, and narrower at one end than the other; but the details are pretty correct, and thus formed, gives the reader a better idea of the whole arrangement. The square lines represent a close board fence 9 feet high, enclosing an area about 850 ft. long by 500 ft. broad; the dotted lines, a post and open board fence about 4 feet high, to which the cattle and horses were fastened, leaving between that and the close fence, a space of 35 feet wide for the promenade of carriages; *a*, carriage entrance gate, at the right and left of which were several small gates for visiters on foot; *b*, entrance gate for the stock; 1, General Committee room; 2, ticket office; 3, a large tent about 240 feet in circumference, with a staging at one end, and seats like an amphitheatre all around, for the accommodation of speakers before the society and the reading of Committee reports; the dots at the right and left were small tents for the use of different Committees to hold consultations and make out reports—the centre dot of the five at the left, a large marquee, pitched expressly for the accommodation of editors, and reporters, and furnished with stationery and refreshments; 4, Floral Hall, with board sides and roof, 9 ft. posts, 36 ft. wide by 114 ft. long, with a broad roof-shaped stand running through the centre, for fruits and flowers—the second in rear, Vegetable Hall, 25 by 100 ft. for fruits and vegetables—the third, Manufacturers' Hall, 25 by 100 ft. for domestic fabrics—the fourth, Farmers' Hall, for agricultural implements; 5, rows of pens for sheep, swine, and poultry. In addition to the above, there were well furnished refectories for the refreshment of visiters inside, these were named after different counties in the state; also two pumps of excellent water at *c*, *c*, the right and left corners of the show-ground, furnished with tin cups, attached by small chains, for public drinking, and strong iron bound buckets for the stock. As the weather was insufferably hot and dry, the pumps proved a most grateful accommodation to the visiters, and were constantly surrounded by them to quench their parched thirst. No food was provided inside for the stock, and considering that the sheep, swine, and some of the other animals, could not well leave the ground at night, and their owners being obliged to stand by and guard them, they suffered greatly from hunger during the show. All other arrangements on the ground which fell under our observation were admirable, quite as good as those we found at the show of the Royal Agricultural Society of England, and reflect high credit on all concerned in making them.

Trial of Plows.—Tuesday the 17th, the exhibition opened by a trial of a small number of plows, on the farm of Mr. Warrall, half a mile east of the show-ground, and did not conclude till the next day. The Delano plow was awarded the first premium. It turned a 6 by 12 inch furrow, with a draught of 300 lbs. There was little to interest the visiter during this day, save the continued arrival of people and stock in town, and articles for exhibition at the different Halls at the show-ground.

Rush to the Show-Ground.—Wednesday the 18th, the sun had scarcely risen from his fiery furnace bed, and began to send forth his scorching tropical rays, than the gates of the show-ground were thrown open, and the front entrances immediately thronged with people of both sexes in carriages, on horseback, and on foot—met by a continued cavalcade rushing in at the opposite end—of horses wildly prancing and neighing a loud alto; cattle pawing up the dust and bellowing forth a deep bass; commingled with the shouting of their keepers—the bleating of sheep—the grunting of swine—and the cackling of poultry, in strains sufficiently varied to fill up all the harmony that the amateurs of such shows could desire, from a united biped and quadruped choir. By 10 o'clock, the spacious area of the show-ground was well filled, and then began the duties of the judges, and now we commenced our rounds in earnest.

Horses.—The show was pretty good, though not as large as we had anticipated, considering the great number of fine animals in the southern counties of New York. The entries were 33 stallions, 6 pairs of match horses, and 9 breeding mares and colts, making 54 head. Among the stallions were some very fine thorough-breds, which to our great regret, by the rules of the Society, were not allowed any premiums; but this mistake will be rectified another year. Among them we quite admired Stafford, from Westchester Co., with his beautiful Arabian-like head, and splendid, fiery action; Henry, exhibited by Mr. Long of Washington Co.; Eclipse, by Mr. Ludlow of Claverack; and a fine blood colt of Mr. Verplank, from Fishkill. The horses of all work, which were alone eligible for premiums, were a reputable lot; and in addition to these, were Samson a very large. English cart horse imported by Messrs. Corning and Sotham of Albany; another of the same breed shown by Mr. Pettit of Onondago; and a cross of the blood horse and Norman belonging to Mr. Bement.

Jacks and Jennies, there were none on the ground. If our own state would not or could not bring forward some of the long-eared brayers, we regret that Dr. Pool, and others from neighboring states, had not come out with a show of these useful animals.

Mules.—We saw only one pair, and fine noble ones they were too, belonging to Mr. Colman of the Astor house. He keeps them on his farm at Poughkeepsie, and finds them kind in harness, and most excellent workers—being stout, quick, and enduring.

Cattle.—Of neat stock, there were 30 bulls, 33 cows, 7 calves, 27 yoke of working oxen, and 22 fat cattle, making 146 head. Considering that many of the larger breeders reside at a distance of several hundred miles from Poughkeepsie, and did not exhibit a single animal from their herds, the show of cattle was much better than we had anticipated. There were some magnificent Durhams present. Mr. Vail's Meteor can not be beaten in the state; and though Mr. Sheaf's beautiful young cow, Grace, only stood third on the premium list, yet we know not her superior in the country. Messrs. Corning and Sotham of Albany, exhibited a splendid lot of 11 Herefords. The cows were really superb, and as their owners claim good milking qualities for them, the Short-Horn men must take care, or before they are aware of it, they will yet meet with powerful rivals from this quarter. Of Devons there were only 3 on the ground, at which paucity of numbers of this highly prized breed, we were absolutely astonished. We doubt whether the cow which took the first prize was a thorough-bred, as she had large black spots on her muzzle, and other marks which betrayed want of purity of blood. The beautiful cow and calf exhibited from Black Rock, and now owned by Roswell W. Colt, Esq. of Paterson, New Jersey, were models of their kind. Ayrshires we noticed a goodly number; some directly imported from Scotland by Scotchmen, who spoke highly of their merits as dairy beasts.

Sheep.—We did not count them, but understood there were 90 head present; comprising a goodly show of Saxons, Merinos, Long-Wools, and South Downs. We particularly admired a splendid Merino buck belonging to Mr. Sanford of Vermont, and some others present which we have not space to mention.

Swine.—The grunters we suppose might have mustered some 40 strong. According to our notion the Berkshires were far superior; next the Leicesters and other white hogs; then a pretty cross of Mr. Bement's between the Neapolitans and Chinese; and last, though not least, a very large, fat, coarse animal, whose breed if he had any we did not learn.

Poultry.—When we consider the value of poultry in the United States, we can not express our astonishment that so few birds of any kind were exhibited. Mr. Bement of Albany was about the only person who showed anything in this line, and he confined himself to a few curious hens, and some beautiful China geese of a peculiar small breed.

Farm Implements.—Though a good many of one kind and another were on the ground, still it was a meager display to what New York ought to make, more especially in plows. We saw nothing especially new, or which has not been spoken of previously in this paper.

Flowers.—After disposing of most of the other things we now bent our eager steps to Floral Hall, where we found such an immense crowd, especially of ladies, continually pouring into the wide promenade of 272 feet length, embracing both sides of the stand, that we found it quite impossible to see things to any advantage. As we hate crowds, except at a distance, we wish hereafter, at least for our comfort, that Mr. Walsh would not make himself quite so popular in this department; or if he will persist in so doing, let him enlarge the premises over which he exercises so tasteful a display. Under his direction, assisted by the fair ladies of Poughkeepsie, up rose pyramids, bouquets, altars, and walls of flowers of every imaginable hue, tastefully grouped, and wreathed, and festooned over the centre stand like some fairy scene.

Fruits—Here we are happy to say was the richest and most varied display yet made at any of the State Society's shows. Messrs. C. & A. J. Downing exhibited from their Highland gardens, 170 different kinds of fruit; Mr. Reid of this city a superb collection of pears; Messrs. Prince & Co.

of Flushing, 120 varieties of apples, and 55 of pears; Mr. J. J. Thomas of Macedon, a large collection of apples; James G. King, Esq. of Highwood, a great variety of the choicest kind of pears; Mr. Donaldson of Blithewood, superb clusters of three different kinds of grapes; Mr. Pell of Pelham, 67 varieties of apples, clusters of grapes, and other fruits. In addition to these, quite a number of gentlemen exhibited choice collections, but we could not learn their names, or the varieties shown.

Vegetables and Seeds.—The exhibition of these was quite equal to the fruits, but we have not space to dwell upon them. Among other things, we noticed a Patagonian gourd 5 ft. 8 in. long; squash weighing 126, 152, and 201 lbs.; cabbages of 30 lbs. weight; corn-stalks 17 feet high; grains and seeds, 35 varieties of wheat from Gen. Harmon; very fine wheat flour, and various other things too numerous to mention. At the right of this hall was stationed an enormous car from Hyde Park, under the care of Messrs. Fuller and Allen, drawn by 10 superb yoke of cattle, and loaded with fruits and vegetables of great variety, and beautifully decorated with cornstalk pillars and festoons of evergreens and flowers. This was a superb affair, got up with great taste, and worthy to grace a conqueror at a Roman triumph. It attracted more attention than anything else upon the ground. A charming group of ladies were within the car all day, doing the honors thereof with equal grace and hospitality. We had half a mind several times in passing, to solicit the privilege of mounting to its festooned bower; but fearing we might not soon be equally able to leave it again, at least through any will of ours, we think we did wisely to forbear.

Domestic Fabrics.—The Manufacturers' hall was scarcely less crowded than that of the Floral, for there was tastefully displayed all that the skill and elegance of fair fingers can so ingeniously shape and array. As we looked forth upon this handiwork, we were no less delighted than amazed. Only think, gentle reader, of a splendid Mosaic chair; of a quilt containing 2,676 pieces, another 3,202, another 4,400, and still another 6,834! We wish we had them for bedspreads, indeed we do. Imagine a thousand other curious things that a lady's fancy only can design, and her cunning fingers execute, and one will then have but an indefinite idea of what was displayed here. We noticed a good exhibition of cocoons and silk. The manufacturers in different parts of the country made a superb show, 95 entries in all, some of which were most magnificent. Messrs. Samuel Lawrence and Co. of Lowell, showed from their Middlesex factory, 62 pieces of all sorts of woollen goods.

Dairy Products.—Here we were again greatly disappointed at the small number of entries, though they seemed very good of their kind. Of cheese, one may any day see twenty times as good an exhibition at the Erie, and several other county shows in the State. We hope our dairymen will make a better turn out another year, for such a meager exhibition gives strangers a poor idea of their valuable products.

Maple Sugar.—The domestic manufucture of this has greatly improved within a few years. We noticed some beautifully crystallized, and other specimens equal to the best crushed loaf sugar.

The Plowing Match.—Thursday, the 19th, this event came off, and a poor affair it was at best, compared with what we have seen at various county shows in New England. One quarter of an acre was the task, and 75 minutes allowed to perform it. Nine pairs of oxen and two pairs of horses only were entered. The oxen took the first prize.

The Address.—At 3 o'clock, P. M., about 5,000 persons obtained seats in and about the great tent, to listen to the address by George Bancroft, Esq. of Massachusetts. It was a finished, elegant production, read with a clear distinct tone, but abounded too much with generalities to suit our taste. He made a trifling mistake in saying that Mr. Van Rensselaer, the late patroon, was the first importer of Durhams, about the year 1824. Mr. Heaton of Westchester county, imported them as early as 1796; and these were followed by a few others, at short intervals, and quite a number of them in Massachusetts, New York, and Kentucky, from 1817 to 1822.

As there were still thousands on the show ground who could not get near enough to hear Mr. Bancroft, in answer to loud calls from the people, Capt. Joy mounted a stand outside of the great tent, and held forth to them for half an hour or so, in a comic address, which elicited continued roars of laughter.

Immediately after Mr. Bancroft finished his address, the chairmen of the respective committees read their reports, and announced the various premiums, which consumed the remainder of the time till dark; when the assembly was dispersed, and the gates of the show-ground closed. Thus ended another of those farmers' jubilees, which are doing so much for the improvement of the agriculture of the country, and the ennoblement of the husbandman.

Amount of Money received.—The amount of receipts at Poughkeepsie for memberships to the Society, and tickets of admission to the show-ground, principally at one shilling each, was about $3,700. In addition to this, the citizens of the village and its neighborhood defrayed the expenses of erecting the edifices and fencing the ground, costing about $1,700, making a total of about $5,400 received.

Number of Visiters.—These were computed during the three days of the show, at not less than 25,000 or 30,000, and the number would have been greatly increased were it not for the dust and excessive heat. We have no recollection of, ever meeting with weather so oppressively hot in this latitude, in the month of September. The sun shone clear during the whole time, and with a fiery fierceness truly tropical. Add to this, the weather had been quite dry for a month previously, and such clouds of dust as every vehicle raised along the roads, was almost enough to blind one. Still the country made a good turn out, and right glad were we to find, the number of ladies present nearly if not quite equal to that of men. It did one's heart good to look upon the buxom girls crowding about, and scrutinizing everything with bright curious eyes. We dare say that the Poughkeepsie show will be quite an epoch hereafter in the history of the fair of Dutchess county, several of whom present might well grace a *Dutchess's coronet.*

The committee of arrangements of the citizens of Poughkeepsie, deserve the highest praise for their exertions throughout the whole proceedings of the show, and a well-deserved tribute was awarded them in the shape of resolutions passed by the Society before leaving the place. The citizens were very hospitable upon the occasion, many keeping open house during the week of the exhibition. For such as were kindly proffered us individually, while there, we return our grateful thanks. Quite a number of distinguished strangers were present, especially from the south, and we understand that all were highly pleased with the show and its entertainments. Some stock transactions took place in a private way during the last day, but to what extent we did not learn.

We now subjoin the list of such premiums as belong to agriculture and the mechanical branches immediately connected with it. There were a great number of discretionary premiums awarded for domestic fabrics, articles of curiosity, &c., &c., for which we have not space, the list already given below being very formidable.

PREMIUMS.

CATTLE.

CLASS I. *Best of any Breed.*

BULLS.—*Best 3 years old and upward.*—Geo. Vail, Rensselaer co., white Durham bull Meteor, 3 years old, bred by himself—by imp. Duke of Wellington, dam imp. Duchess, by Duke of Northumberland (1940). $20.

Best 2 years old.—C. F. Crosby, Albany co., white Durham bull Osceola, 2 years and 5 months old, bred by Henry Whitney, New Haven, Conn.—by Tempest, dam imp. Ringlet, by Belshazzar. $15.

Best Yearling.—Thos. Oliver, Westchester co., imp. roan Durham bull Marius, 1 year and 9 months old, bred by Earl Spencer, Wiseton, Eng.—by Roman, dam by Waverly. $10.

Best Calf.—Corning & Sotham, Albany co., red and white Hereford calf Pomaria, 6 months old, bred by themselves—by imp. Sir George, dam imp. Maria, by Young Favorite. $5.

COWS.—*Best 3 years old and upward.*—James Lenox, Dutchess co., imp. red Durham cow Red Lady, 10 years old, bred by Jonas Whitaker, Burley, Eng.—by Hubback (2142), dam by Don Juan (1923). $20.

Best 2 years old.—E. P. Prentice, Albany co., roan Durham heifer Nell, 2 years and 4 months old, bred by himself—by Northumberland, dam Daisy, by Leopard. $15.

Best Yearling.—Duncan Robinson, Dutchess co., red grade Durham heifer, 1 year and 10 months old, bred by himself. (No pedigree given.) $10.

Best calf.—Robert L. Pell, Ulster co., grade Durham heifer calf, bred by himself. (No pedigree given.) $6.

CLASS II. *Durhams.*

Bulls 3 years old and upward.—Geo. Vail, Rensselaer co., 1st premium, white bull Meteor, 3 years old, bred by himself—by imp. Duke of Wellington, dam imp. Duchess, by Duke of Northumberland (1940). $15;—D. D. Campbell, Schenectady co., 2d, white and red bull Rotterdam, 4 years old, bred by himself—by Bruce, dam Maria, by imp. Copson, $10;—Robert Donaldson, Dutchess co., 3d, imp. roan bull Prince Albert, 4 years old, bred by Jonas Whitaker, Burley, Eng.—by Sir Thomas Fairfax, dam Paulina, by son of Matchem. Diploma.

Bulls 2 years old.—C. F. Crosby, Albany co., 1st premium, white bull Osceola, 2 years and 5 months old, bred by Henry Whitney, New Haven, Conn.—by Tempest, dam imp. Ringlet, by Belshazzar, $10;—Geo. Vail, Rensselaer co., 2d, roan bull Symmetry, 2 years and 1 month old, bred by himself—by imp. Duke of Wellington, dam imp. Duchess, by Duke of Northumberland (1940), $5;—Wm. Salisbury, Green co., 3d, white bull Sir Peter, 2 years and 4 months old, bred by himself—by Splendor, dam May Rose, by Morris' imp. George Canning, diploma.

Yearling Bulls.—Thos. Oliver, Westchester co., 1st premium, imp. roan bull Marius, 1 year and 9 months old, bred by Earl Spencer, Wiseton, Eng.—by Roman, dam by Waverly, $10;—J. F. Sheafe, Dutchess co., 2d, roan bull Hudson, 1 year and 2 months old, bred by Lewis F. Allen, Erie co.—by Mayduke, dam Fanny Jarman, by imp. Cadmus, $5;—Jas. Lenox, Dutchess co., 3d, red roan bull Dandy, 1 year and 4 months old, bred by himself—by imp. King Charles II., dam imp. Red Lady, by Hubback, diploma.

Bull Calves.—C. N. Bement, Albany co., 1st premium, white bull calf Albino, 5 months old, bred by himself—by Royal William, dam Gazelle, by Astoria, $5;—Geo. Vail, Rensselaer co., 2d, white and red bull calf, 5 months old, bred by himself—by imp. Duke of Wellington, dam by imp. Copson, diploma.

Cows 3 years old and upward.—J. F. Sheafe, Dutchess co., 1st premium, imp. roan cow Venus, 11 years old, bred by Mr. Pilkington, Lancashire, Eng.—by Monarch, dam by son of Sir Dimple, $15; — Geo. Vail, Rensselaer co., 2d, red roan cow Victoria, 3 years old, bred by himself—by imp. Duke of Wellington, dam by imp. Copson, $10;—J. F. Sheafe, Dutchess co., 3d, white cow Grace, 3 years old, bred by Lewis F. Allen, Erie co.—by Snowdrop, dam Daisy by Bertram II., diploma.

Heifers 2 years old.—E. P. Prentice, Albany co., 1st premium, roan heifer Nell, 2 years and 4 months old, bred by himself—by Northumberland, dam Daisy, by Leopard, $10;—E. P. Prentice, 2d, roan heifer Esterville, 2 years and 3 months old, bred by himself—by Dan'l O'Connell, dam imp. Esterville, by Sir Alfred, $5;—Dudley B. Fuller, Dutchess co., 3d, red and white heifer Victoria, 2 years and 5 months old, bred by himself (pedigree, &c., not given), diploma.

Yearling Heifers.—Geo. Dakin, Dutchess co., 1st premium, white and red heifer (no breeder, age, or pedigree given), $10;—D. D. Campbell, Schenectady co., 2d, red and white heifer Red Rose, 1 year and 4 months old, bred by himself—by Rotterdam, dam Maria, by imp. Copson, $5;—M. Kelly, Dutchess co., 3d, roan heifer (no breeder, age, or pedigree given), diploma.

Heifer Calves.—Geo. Vail, Rensselaer co., 1st premium, red and white heifer Sally III., bred by himself—by imp. Duke of Wellington, dam Sally, by imp. Copson, $5;—C. N. Bement, Albany co., 2d, white heifer calf Albiness, bred by himself—by Royal William, dam Delight, by Astoria, diploma.

CLASS III. *Herefords.*

Bulls 3 years old and upward.—None shown.

Bulls 2 years old.—Corning & Sotham, Albany co., 1st premium, red and white bull Edwin, bred by themselves—by imp. Young Prize, dam imp. Maria, by Young Favorite, $10. No other of this age shown.

Yearling Bulls.—None shown.

Bull Calves.—Corning & Sotham, 1st premium, red and white bull calf Pomaria, 6 months old, bred by themselves—by imp. Sir George, dam imp. Maria, by Young Favorite, $5. None other of this age shown.

Cows 3 years old and upward.—Corning & Sotham, 1st premium, imp. red and white cow Aston Beauty, 6 years old, bred by Wm. Hewer, Gloucestershire, Eng.—by a son of Old Sovereign, dam by Fitz Favorite, $15;—Corning & Sotham, 2d, red and white cow Victoria, 5 years old, bred by Wm. Hewer, Gloucestershire, Eng.—by Major, dam by Favorite, $10;—Corning & Sotham, 3d, imp. red cow Perfection, 5 years old, bred by Wm. Hewer, Gloucestershire, Eng.—by Major, dam Bloomy, by Favorite, diploma.

Heifers 2 years old.—Corning & Sotham, 1st premium, red and white heifer Mary, bred by themselves—by Young Favorite, dam imp. Perfection, by Major, $10. None other of this age shown.

Yearling Heifers.—Corning & Sotham, 1st premium, red and white heifer Lilla, bred by themselves—by imp. Young Prize, dam imp. Victoria, by Major, $10;—Corning & Sotham, 2d, red and white heifer Maggie, bred by themselves—by imp. Young Prize, dam imp. Rarity, by Major, $5. None others of this age shown.

Heifer Calves.—None shown.

Class IV. *Devon Cattle.*

To L. F. Allen, Black Rock, for best bull calf, $5.

For best cow, 1st, to D. B. Lent, Poughkeepsie, $15;—2d, to L. F. Allen, $10.

Class V. *Ayrshire Cattle.*

For best bull, 1st, to Joel Rathbone, Albany, $15;—2d, to C. N. Bement, $10.

The Committee also awarded a premium of $15 to Mr. Archibald of Montreal, for his Ayrshire bull, Sir Walter Scott.

For best cow, 1st, to Thomas Ellison, New Windsor, $15;—2d, to Joel Rathbone, $10;—3d, to Cornelius Dubois, Poughkeepsie, vol. Transactions.

Class VI. *Grade Cattle.*

For best 2 years old heifer, 1st, to Duncan Robinson, Fishkill, $5;—2d and 3d, to J. F. Sheaf, Poughkeepsie, $3 and diploma.

Class VII. *Native Cattle.*

For best cow, 1st, to R. Donaldson, $12;—2d, to R. L. Pell, $8;—3d, to Z. Pratt, Greene county, vol. Transactions. A vol. of Transactions was awarded to Hezekiah Smith, Greene county, for his native bull; and a premium of $3 to John G. Parker, Poughkeepsie, for his native calf.

WORKING OXEN AND STEERS.

For best pair, 1st, to Luther Comstock, Oneida, $15;—2d, to Isaac Doty, Clinton Hollow, $10;—3d, to H. D. Grant, Amenia, vol. Transactions;—4th, to F. W. Akin, Greenbush, diploma.

Best 3 yoke oxen, 1st, to Jas. S. and Wm. Wadsworth, Geneseo, $15;—2d, to D. B. Fuller, Hyde Park, $10.

Best 10 yoke oxen from one town, 1st, to D. B. Fuller, J. W. Wheeler, Elias Butler, Thomas Allen, and John Traver, Hyde Park, $20.

Best 3 years old steers, 1st, to Charles Wescott, Fishkill, $15; 2d, to J. W. Wheeler, Hyde Park, $10.

Best yearling steers, to Dr. Vandeburgh, Rhinebeck, $10.

FAT CATTLE.

Best pair, 1st, to George Mills, Livingston county, $20;—2d, to Thomas Swift, Amenia, $15;—3d, to A. M. Underhill, Clinton Hollow, $10;—4th, to Duguid & Candee, Onondaga, diploma.

Best fat ox, 1st, to D. D. Campbell, $15;—2d, to Duncan Robinson, $10;—3d, to Duguid & Candee, vol. Transactions.

Best fat heifer, 1st, to Martinus Calkins, Chenango county, $15;—2d, to Walter Wakeman, North East, $10;—3d, to Dr. Vandeburgh, vol. Transactions.

HORSES.

Best stallion over 4 years old, 1st, to Wm. Salisbury, $20;—2d, to John Greenfield, Newburgh, $10;—3d, to Silas Belding, Amenia, $6 and vol. Transactions;—4th, to A. J. Skidmore, Fishkill, $4 and Diploma.

Best 3 years old stallion, 1st, to Calvert Canfield, Pleasant Valley, $15;—2d, to Jacob Duncan, Union Vale, $10;—3d, to Job Sisson, Washington, $6.

The Committee on Stallions made the following special awards: to David B. Haight, Dutchess county, $10;—Aaron Bailey, Cherry Valley, $6 and diploma; Edward Long, Cambridge, $6;—to David Long, as groom, $5; and diplomas to Epenetus How, North Salem; Wm. H. Ludlow, Claverack; C. F. Crosby, Watervliet; John Cooper, Poughkeepsie; Bastion Moore, Columbia county; S. V. R. Ableman and Corning & Sotham, Albany; Benj. Petit, Oneida county; L. W. Ten Broeck, Columbia co.; Samuel Verplank, Fishkill.

Best breeding mare and colt, 1st, to Josiah Williams, Poughkeepsie, $20;—2d, to Isaac T. Frost, $10;—3d, to Thomas Dearin, Poughkeepsie, diploma. The Committee also awarded $10 to S. C. Roe, and diplomas to P. Lyon, Washington, and Moses Clark.

Best pair matched farm horses, 1st, to Allen B. Stockholm, Fishkill, $10;—2d, to Philip Vandelbelt, Fishkill, vol. Transactions.

Best pair matched horses, 1st, to Wm. Landon, Albany, $10;—2d, to Wm. A. Davis, Poughkeepsie, vol. Transactions;—3d, to J. P. Beekman, Kinderhook, diploma.

Best single horse, 1st, to De Witt Hasbrouck, Orange county, $10;—2d, to Duguid & Candee, vol. Transactions. Volumes of Transactions were also awarded to Anthony Van Bergen, Coxsackie; Samuel Townsend, Orange county, and Benjamin Van Voast.

MULES.

Second premium to Nathan Colman, Po'keepsie, $10.

SHEEP.

Class I. *Long Wooled.*

Best buck, 1st, to L. D. Clift, Carmel, $10;—2d, to Thomas Dunn, Albany, $5;—3d, to Nathaniel Halleck, Milton, diploma.

Best pen of 3 ewes, 1st, to L. D. Clift, $10;—2d, to Edward Halleck, Milton, $5;—3d, to Henry Mesier, Fishkill, diploma.

Best pen of 5 lambs, to Willet Colver, Hyde Park, $5.

Class II. *Middle Wooled.*

Best buck, 1st, to Isaac Foster, Hillsdale, $10;—2d, to J. McD. McIntyre, Albany, $5;—3d, to S. & J. Wait, Orange co., diploma.

Best pen of 3 ewes, 1st, to S. & J. Wait, $10;—2d, to J. McD. McIntyre, $5;—3d, to Edward Halleck, diploma.

Best pen of 5 lambs, to D. B. Haight, $5.

Class III. *Fine Wooled.*

Saxons.—Best bucks, 1st, to C. W. Hull, New Lebanon, $10;—2d, to Abner Brown, North East, $5;—3d, to Samuel H. Church, Vernon, diploma.

Best pen of 3 ewes, 1st, to Walter Wakeman, North

East, $10;—2d, to Samuel H. Church, $5;—3d, to S. B. Crocker, Vernon, diploma.

Merinos.—Best buck, 1st, to H. S. Randall, Cortland Village, $10;—2d, to H. & J. Carpenter, Po'keepsie, $5.

Best 3 ewes, 1st and 2d, to H. S. Randall, $10 and $5;—3d, to H. & I. Carpenter, Poughkeepsie, vol. Transactions.

Best 5 lambs, to Rawson Harmon, jr., Wheatland, $5.

FAT SHEEP.

Best, to J. McD. McIntyre, $10;—2d, to D. W. Elting, New Paltz, $5;—3d, to J. C. Haviland, Dutchess co., vol. Transactions.

SHEEP FROM OTHER STATES.

Best fine wooled buck, 1st, to Jacob N. Blakeslee, Litchfield county, Conn., silver medal;—2d, to Stephen Atwood, Litchfield county, Conn., 2 vols. Transactions.

Best 3 fine wooled ewes, to Jacob N. Blakeslee, Conn., silver medal.

SWINE.

Best boar, 1st, to Benj. H. Hart, Lagrange, $10;—2d, to James Lennox, $5;—3d, to C. F. Crosby, dip.

Best sow, 1st, to W. A. S. North, Duanesburgh, $10;—2d, to W. T. Hulse, Blooming Grove, $5; 3d, to Thos. T. Doty, Beekman, diploma.

Best lot of pigs, 1st, to D. B. Lent, $5;—2d, to Thomas T. Doty, diploma.

The Committee commend a boar and sow of Neapolitan breed, offered by C. N. Bement, and a Leicester boar of John Wilkinson.

FARM IMPLEMENTS, &C.

Best plow, 1st, to Howard Delano, Mottville, Onon. co., $15;—2d, to Thomas D. Burrall, Geneva, shell wheeled plow, silver medal;—3d, to, W. U. Chase, Amsterdam, $5;—4th, to M. D. & T. H. Codding, Rochester, diploma.

For gang plow, to Thomas Wiard, East Avon, $15.

For best dynamometer, to W. U. Chase, $15;—2d, to T. D. Burrall, Geneva, $7;—3d, Mr. Seymour, Hartford, Conn., diploma.

Best farm wagon, 2d premium to Wm. Cox, Stamford, vol. Transactions.

Best horse cart, to John Wilkinson, Union Vale, $5.

Best horse rake, 1st, to Gustavus White, Middlefield, $5;—2d, to Wm. B. Stoddard, Moravia, vol. Transactions.

Best grain cradle, to David Flanders, St. Lawrence co., $3.

Best half dozen hay forks, to Taylor, Buttolph, & Co., West Stockholm, diploma.

Best dung forks, to Taylor, Buttolph, & Co., vol. Transactions.

Best harrow, to John Wilkinson, vol. Transactions.

Best fanning mill, 1st, to Isaac T. Grant, Schagticoke, silver medal;—2d, to David Bryan, North East, vol. Trans.;—3d, to B. Dodge, Watertown, diploma.

Best threshing machine, 1st, to J. A. Taplin, Montpelier, Vt., $15;—2d, to S. S. Allen, Poughkeepsie, vol. Transactions;—3d, to A. Wheeler & Brothers, Chatham, diploma.

Best straw cutter, 1st, to Wm. Hovey, Worcester, Mass., silver medal;—2d, to Stephen Armstrong, Poughkeepsie, vol. Transactions;—3d, to Thos. P. Thorn, Fishkill, diploma.

Best cheese press, to Egbert Dodge, Watertown, $3.

Best field roller, to T. D. Burrall, diploma.

Best corn sheller, to Francis N. Smith, Kinderhook, diploma.

Best bee palace, to M. O. Remmington, Cayuga co., diploma.

Best bee hive, to E. Townley, New York, $5.

Best harvesting machine, to George Easterly, Heart Prairie, Wisconsin, diploma.

Best model of hay press, 1st, to Dedrick & Brothers, Claverack, vol. Transactions;—2d, to J. H. P. G. Yelverton, Poughkeepsie, diploma.

Best rut shears, to B. Benedict, Geneseo, diploma.

Best washing machine, to Joseph C. Rich, Penfield, diploma.

Best clover machine, to Wheeler & Brothers, Columbia co., vol. Transactions.

Best clover gatherer, to Benj. N. Hart, diploma.

Best apple drier, to Gustavus White, diploma.

Best churn, to David Dakin, Pine Plains, diploma.

Best cultivator plow, to B. Langdon, Troy, $5.

Best stump machine, to R. H. Hall, Owego, silver medal.

DAIRY.

Best butter, 1st, to I. Martin, Ulster co., $15;—2d, to Hester Ann Travers, Troy, silver medal;—3d, to Theodore Allen, Hyde Park, silver medal;—4th, to Nathan Colman, Dutchess co., silver medal;—5th, to Caroline S. Cheesman, Dutchess co., silver medal;—6th to John Lester, Lagrange, silver medal.

Best cheese, 1st, to H. P. & G. Allen, Duanesburgh, $15;—2d, to A. L. Fish, Litchfield, silver medal.

MAPLE SUGAR.

Best, to Joel Woodworth, Watertown, $15;—2d, to Wm. E. White, Walton, $10;—3d, to Alfred Fitch, Riga, diploma.

SILK.

Best manufactured silk, 1st, to George Gents, agent for Murry & Co., Paterson, N. J., $20;—2d, to Clark Avery, Madison county, 2 lbs. sewing, $10;—3d, to Miss Margaretta Hutchinson, Long Island, $5; 4th, to Wm. Thomas, Col. co., diploma.

Best reeled silk, 1st, to Ruth S. Cary, Saratoga co., $10;—2d, to Ira Howland, Pleasant Valley, $5;—3d. to C. R. Cable, Constantia, diploma.

Best cocoons, 1st, to Ira Howland, $10;—2d, to Palmer Cook, Red Hook, $5;—3d, to J. C. Church, Poughkeepsie, diploma.

DOMESTIC MANUFACTURES.

Best woolen carpets, 1st, 2d, and 3d, to C. M. Pelton, Poughkeepsie, $5, $4, and $3.

Best rag carpets, 1st, to Mrs. C. W. Tower, Amenia, $3;—2d, to Mrs. James Ryan, New Paltz, $2;—3d, to J. Palmer, Poughkeepsie, $1.

Best woolen cloth, 1st, to Scofield, Capron, & Co., Walden, $5;—2d, to J. Bowen, Pleasant Valley, $4;—3d, to Titus, Sweet, & Co., Dutchess co., $3.

Best carpet coverlet, 1st, to Philip P. Knapp, Beekman, $4;—2d, to Philip Dubois, New Paltz, $3;—3d, to Israel Hall, Fishkill, $2.

Best woolen blanket, to Norman Culver, Arcadia, $5.

Best linen sewing thread, 1st, to Peter Crispel, jr., Ulster co., $2;—2d, to Norman Culver, $1.

Best linen diaper, 1st and 2d, to Mrs. Russel, Lebanon Springs, $5 and $4;—3d, to Peter Crispel, jr., $3.

Best linen, 1st, to Mrs. Russel, $5;—2d, to Peter Crispel, jr., $5;—3d, to D. W. Elting, Ulster co., $3.

Best linen knit stockings, 1st, to Mrs. Freelove Arnold, Quaker Hill, $2;—2d, to Peter Crispel, jr., $1;—3d, to Mrs. Vincent M. Townsend, diploma.

Best cotton knit stockings, 1st, 2d, and 3d, to Mrs. Charles Thompson, Poughkeepsie, $2, $1, and Diploma.

Best woolen knit stockings, 1st, to S. Bassett, North East, $3;—2d and 3d to Mrs. Daniel Washburn, Union Vale, $1 and diploma.

Best tow cloth, 1st to Peter Crispel, $1.

Best hearth rugs, 1st, to Chas. M. Pelton, Poughkeepsie, $5;—2d, to Nancy Hull, Lexington Heights, $4;—3d, to Lydia Peck, Lexington Heights, $3.

Best Flannel, to Mrs. G. W. Henry, Lowville, $5.

VEGETABLES.

Best celery, to Robert Kelly, Rhinebeck, $2.

Best cauliflower, to Samuel Curry, Poughkeepsie, $2.

Best turneps, to Michael Kane, gardener of John A. de Groff, Hyde Park, $1.

Best carrots, to John B. James, Rhinebeck, $1.

Best beets, to R. L. Pell, $1.

Best parsneps, to W. Harrocks, Hyde Park, $1.

Best cabbage, to R. L. Pell, $1.

Best tomatoes, to R. L. Pell, $1.

Best egg plants, to John B. James, $1.

Best onions, to Joseph T. Adriance, Po'keepsie, $1.

Best Lima beans, to Joseph T. Adriance, $1.

Best double parsley, to Michael Kane, $1.

Best squashes, to R. L. Pell, $1.

Largest pumpkin, to John Townsend, Hyde Park, $1.

Best seed corn, to J. F. Osborn, Port Byron, $1.

Best table potatoes, 1st, to W. Harrocks, $2;—2d, to Samuel Curry, $1.

Diplomas were awarded for celery to Samuel Mitchell, Poughkeepsie—to W. Harrock, for turneps and for fine specimen of green peas—to Michael Kane, for orange carrots—to J. F. Adriance, Poughkeepsie, for white carrots and for best collection of various kinds of beets—to Nathan Colman, for beautiful specimens of white onions—to N. Shephard, for Lima beans—to D. B. Fuller, for 8 varieties of squashes—to A. J. Downing, for seedling rhubarb—to Robert Kelly, for vegetable oyster.

Volumes of Transactions were awarded to Joseph F. Adriance for Cuba pumpkins, eighteen from one seed, weighing 776½ lbs.—to Hamilton Morrison, Montgomery, for twelve varieties of potatoes—to Mrs. Verplanck, Fishkill Landing, for several fine heads of lettuce—to Thomas Addis Emmet, New York, for okra and cucumbers.

FRUIT.

For greatest varieties of table apples, 1st, to A. J. Downing & Co., Newburgh, $5;—2d, to John R. Comstock, Washington, $3;—3d, to J. F. Osborn, Port Byron, vol. Transactions.

For 12 best table apples, to R. L. Pell, Pelham, $3.

For greatest variety of table pears, 1st, to A. J. Downing & Co., $3;—2d, to Wm. Reid, Murray Hill, vol. Transactions.

Volumes of Transactions were awarded to A. J. Downing & Co. for greatest variety of winter pears—to Alex. H. Smith, Hyde Park, for best 12 Quinces—to Mrs. A. Thorpe, Schodack, for best 12 peaches—to A. J. Downing & Co., for best 24 plums—to W. North, Poughkeepsie, for best 6 bunches native grapes—to Robert Donaldson, Blythwood, for best 6 bunches foreign grapes.

A diploma and $1 were awarded to Moses Humphrey, Poughkeepsie, a colored man, 80 years old, for fine specimens of grapes.

FLOWERS.

For greatest variety, 1st, to Miss Verplanck, Fishkill, $5;—2d, to Wm. W. Harrock, $3.

For floral ornaments, 1st, to Wm. Prince & Co., Flushing, $5;—2d, to Miss Garretson, Rhinebeck, $3.

For dahlias, 1st, to J. M. Thorburn & Co., New York, $5;—2d, to J. B. James, Rhinebeck, $3;—3d, to Mrs. Pine, Flushing, vol. Transactions—4th, to Mr. Swift, Poughkeepsie, diploma. Discretionary—$3 to Mr. Van Waggoner, Poughkeepsie, and $1 to Samuel Mitchell, Poughkeepsie.

For greenhouse plants, 1st, to John N. Stuveysant, Hyde Park, vol. Transactions;—2d, to J. Charred, Poughkeepsie, diploma.

PLOWING MATCH.

First premium to Wm. H. Werrell, Poughkeepsie, $15;—2d, to Peter F. Procius, Kinderhook, $12;—3d, to Valentine Halleck, $10;—4th, to E. B. Smith, Poughkeepsie, $6;—5th, to Elias Westervelt, Poughkeepsie, diploma. The committee awarded prizes of $3 each, to John Day, of Lithgow, and James East, of Poughkeepsie, as the best plowmen.

IMPROVED AGRICULTURAL IMPLEMENTS.

Silver medals were awarded to George Geddes, Onondaga co., for an improved harrow—to Roswell H. Hall, Owego, for a stump extractor—to Wm. Hovey, Worcester, Mass., for his straw cutter—to I. T. Grant, Schagticoke, for a fanning mill.

DISCRETIONARY PREMIUMS.

Flour.—To E. S. Beach & Co., Akrom mills, Ohio, for a *good* barrel of flour, diploma—to Philip Garbutt, Wheatland, N. Y., for a *better* barrel of flour, $3—to John Williams, Rochester, for the *best* barrel of flour, $5.

Diplomas were awarded to Comstock & Johnston, of Rome, for a splendid assortment of garden tools—to Peter Crispel, jr., for a specimen of flax—to Gen. R. Harmon, jr., Wheatland, for 35 varieties of wheat in the ear—to John R. Stuveysant, Hyde Park, for 3 topknot fowls, remarkable for laying eggs the whole year without intermission—to J. B. Hayes, Hastings, for a specimen of Egyptian wheat in the ear—to Russell Comstock, Washington, for seedling apples and pears—to Anson Barbyde, Col. co., for 3 models of bee hives and bee house.

Smut Machines.—To Wm. Delaney, Canterbury, $5;—to W. G. Borland, Little Falls, $8;—to E. F. Cushman, Troy, $3.

A premium of $2 was awarded to John Wilkinson, Union Vale, for a specimen of crystallized sugar—to John C. Hall, Fallsburgh, for a beautiful sample of timothy seed, $3.

DEATH OF GRANDEE.

It is with no little regret that we record the loss of this invaluable Merino buck, by an accident about 3 months since. He was imported with a small flock of Merino ewes, in 1840, by Mr. Collins of Connecticut, from the royal flocks of Rambouillet, in France. Grandee was certainly the most superb Merino that ever came under our inspection, though we have seen many from the early importations of Spain of Col. Humphrey and others, down to the latest pure bred here, and "*improved*" (as they are called!) by crosses with various breeds of our own and other countries. But for his untimely death, Grandee would have been exhibited at the late show of the New York State Agricultural Society at Poughkeepsie. There are many valuable Merino sheep in the United States possessing more or less good blood; yet we have heard but one expression of opinion from gentlemen who have examined Grandee, namely: that for combination of great weight—fineness, and *evenness* of fleece, coupled with superior hardiness of constitution—blood-like form and character, with singular noble aspect, he was never equalled by any of his kind imported into or bred in the United States. He is indeed a great national loss; for in a few generations, by means of his stock, he would have stamped a character upon our fine wooled flocks which would have been of inestimable value to the country. We understand that it is Mr. Collins' intention to replace Grandee by another direct importation from Europe.

KEEPING DEER.

In order to keep deer in a thriving and healthy state, their enclosure ought not to be stocked to exceed three animals to the acre: that is to say, for a herd of 30 animals, including young and old, the park should embrace at least 10 acres. Deer require a large range, and however small the herd, we would not confine them to an enclosure less than 5 acres; and when it is less than 30 acres or so, and the herd exceeds two deer to the acre, they should be shifted every little while to a different enclosure. For example, if we had 20 deer, and we were under the necessity of confining them within pretty close limits, we would give them the range of an enclosure of 10 acres for four months, then shift them to another for four months, and thus continue from year to year. The park should be a dry soil, with a clear stream of water running through it, and contain sufficient pasture to keep the deer during the summer, and several acres of wood land of a mixture of large and small trees and some thick underbrush for browsing, as they are extremely fond of this. We have been told by those highly experienced in keeping deer, that if they can not have an opportunity of browsing during the winter and spring, they soon become diseased, and droop and die. If the fence be a stone or brick wall, it should be at least 6 feet high; if of wood, 7 or 8 feet, and made so close that a dog of over 20 lbs. weight can not get through it.

The feed, housing, and general management of deer, may be like that of a flock of Merino sheep, save that their sheds should be erected in their parks, and their feed during winter be carried there to them. In addition to hay, which should be of the finer kinds of grass, they are very fond of corn stalks and blades. They may be fed corn or any sort of grain in a moderate quantity, though we have found oats and beans suit them best. They also like roots, cabbage, and any green food; but in feeding these be careful not to give them so much as to make them scour. The best method of salting them, as indeed all kinds of stock, is to put lumps of rock salt on the ground, or under their sheds in a low tub or box, so that they can come and lick it when they please. They require water in the winter as well as summer. The pasture part of their park should be moderately limed every two or three years, and when they are shifted out of it, a few cows may be turned in to eat up such grass as the deer reject, or cattle may run in the same pasture with them; a few geese may also be kept there, as they devour noxious weeds and grass which are inimical to the health of all animals.

Deer are pretty pets, especially for the ladies. Sailing up the Hudson the past summer, we saw on a shady lawn fronting a beautiful cottage and sloping to the river, a fine little girl dressed in snowy white, gamboling with a pair of dappled fawns and an Italian greyhound. It was a charming sight—each beautiful and graceful in its own nature, and full of the spirit and joy of life.

When much noticed, deer become very fond of man, and are as affectionate as dogs. We have had them so tame as to delight in coming into the house, and even couching upon a bed; and they would not only come at our call, and follow us all over the farm, but even along the public high road, regardless of other objects there. When not likely to be disturbed, they may run with the cattle at all seasons except that of breeding; they should then be kept up in a strong enclosure by themselves, as the does at this time are apt to become a little wild, and the bucks are sometimes dangerous to approach. Large herds of deer are kept by gentlemen at the south and west, a few buffalo also and elk, and we shall be quite obliged to any of our friends more experienced in keeping these animals than we are, to give us full particulars regarding them. We have seen herds of 1,500 deer, or more, in parks in England, where they have a range of several miles.

It would be well to obtain bucks from some other herd for the young does, and in selecting them be careful to procure the largest, strongest, and finest. We should fat and make venison of all past 5 or 6 years old.

PEDIGREES OF PEDRO AND FORTUNE.

We respectfully solicit from Mr. Solomon W. Jewett of Vermont, and Mr. Henry S. Randall of New York, at their earliest convenience, the pedigrees and breed of Mr. Jewett's rams Pedro and Fortune, pictured and described in the present and late volumes of the Albany Cultivator. We also request Mr. Randall to inform us where the "*pure Paulars* in the United States, in the hands of various individuals," are to be found, of which he speaks at page 25 of the Cultivator, for 1844, as we greatly desire the "satisfaction" of looking at and inspecting them. We likewise request Mr. Jewett to inform us, where the "*Simon Pure* flock of 400 Paulars" can be seen, which he describes in Vol. II., page 212, of the American Agriculturist. We do not ask for the above information invidiously, but for the purpose of satisfying our own and others' curiosity, and also to give Messrs. Jewett and Randall a full opportunity of proving, as they have asserted they could, that there are many *pure* Paular Merino sheep still to be found in the United States, whose pedigrees and breeding are indisputable.

Deferred Articles.—The space which we are obliged to devote to the State Agricultural show at Poughkeepsie, has crowded out several articles which we had designed should find a place in this number. Among these is Agriculture in Scotland, No. 2; Blight in Pear Trees, &c., &c.

Transmutation of Grain.—For a curious article on this vexed subject see Foreign Agricultural News, page 315.

AGRICULTURAL PUBLICATIONS.

I HAIL the monthly issue of the American Agriculturist and kindred journals, with quite as much interest and anxiety, I have no doubt, as many of your commercial men do the arrival of the Great Western, Acadia, &c., from over the Atlantic, which I suppose will argue, without farther proof, that I am decidedly in favor of agricultural publications, or "*book-farming*," as some of our worthy farmers are pleased to term it. I am happy to add that I am, and that I conceive it to be my interest to seize every opportunity offered me to peruse such works; not only that I may profit by the experience of others, who may be better informed than myself, but that I may become acquainted with useful facts, which will enable me to advocate and defend a cause I know to be fraught with interests, teeming with everything that is noble and good. But useful and valuable as such works are, and of necessity should be; and as much as I believe the farmers in my own section, as well as in many other parts of the country, have been benefited and their farms improved by the perusal of them; and as much as I respect and esteem their many able contributors, yet I have a word to offer in the way of complaining. I have hinted that many good things have been spread abroad through the medium of agricultural publications, for which I honor their able conductors, yet against many good things contained therein I am bound to enter my solemn protest; and if you have the patience to bear with me at all, I must without farther ceremony descend to particulars.

I have long considered my objections of a serious nature, inasmuch as I believe they affect a more extended circulation of these valuable works; and, consequently, a great amount of useful information is shut out from the very class of people who most need it.

First, I shall refer to the very many *hard* words made use of by *scientific* writers; also to the very indefinite and elaborate way many writers have of expressing their ideas. (*a*) One instance at hand may suffice to explain my meaning. When I opened the July number of your paper, I noticed an article on the "Culture of Tobacco," which to cultivate successfully, the writer said required "an abundant supply of saline matter," and "a sufficient source of ammonia." Now I am not going to charge the body of our farmers as being inexcusably ignorant; I would scorn to offer such an insult; but a great many of them are plain, practical, working men—men who have had much to struggle against and much to contend for—hardy pioneers who have had to carve out their perilous track through forests of wood and stone—veterans who have had to follow the plow instead of treading our college courts; such are many of the real owners of the soil through our country, men who are willing to read, yet not such *Greek* as I have quoted—they want to come right at the plain thing at once. Now of such, who knows what "saline matter" is? Does it mean *salt?* then why not say salt at once and be done with it; everybody knows what salt is, and surely any one could understand a man if he said one bushel of salt to the acre would benefit a certain crop. (*b*)

Secondly, the writer adds, "a sufficient source of ammonia." Now who knows what "ammonia" is? And who can tell what quantity to the acre "a sufficient source" is? And after reading the article, what farmer could go into his field and tell whether "a sufficient source of ammonia" existed in that soil or not? Now is the farmer benefited by such reading? On the contrary, is he not more firmly set against such works. Well, I asked who knows what "ammonia" is? Says one, "go to Walker's Dictionary." Well, we go there, and find "ammonia" is "*volatile alkali.*" Now the reader is just about as much enlightened as he was before. (*c*) Says another, "why, there is many a one knows what 'ammonia' is; but if he don't, he ought to know." Admit it. Now I don't insist upon it that a great majority of your subscribers could not find out what "ammonia" was, but I simply adduce this specimen as one among a hundred others, equally unintelligible to the class of readers to whom I allude. Neither do I look upon agricultural publications as designed for learned or unlearned men *alone*. I would have them plain and practical, equally intelligible to all. (*d*)

It is for the plain, hard-fisted farmer, who to read understandingly wants the plain English before him; that is the respectable class of citizens I plead for; they are the men to be really benefited. Now this is no mere theory; I honestly believe it to be an existing incumbrance in the way of a more extensive improvement. I know I shall have scientific men up in arms against me; nevertheless, I believe I assert the truth when I say, that three fourths of our hard-working farmers are not *scientific* men; consequently, the very class of men who need the *most* information, *get* the *least*. If this is really an important objection, and it could be done away with, if scientific men would write plain articles, couched in plain language, and every reader could be made to feel at home, I believe the advantages to the farming community would be ten-fold. Now we are not interested in the "Culture of Tobacco" here in Jersey; I for one never saw tobacco growing, and have no idea how it grows or what it looks like. (*e*) Had the article I have taken the liberty to allude to been headed "On the Culture of Corn," nine tenths of our farmers, though deeply interested in its culture, after reading the first three or four lines would have dropped the article and passed it by. Not because the article is not good and worthy of consideration, and one that reflects great credit on its author, but because we have a large class of readers that can not appreciate it.

Again, in articles headed, "On the Application of Gypsum," I myself neglected for a long while to peruse them under this caption, because I quite took it for granted that "gypsum" was some foreign article, known and applied in perhaps every nook and corner of the globe but Jersey. Now if "gypsum" is more commonly called "plaster-of-Paris," why not say so? We have no other name for that substance here; and indeed, I can not see the policy of calling the same thing by one name in New York and by another in Jersey. We have some writers, for instance, who can not say, "put one ounce or two ounces of saltpetre on your meat;" but they say, "to cure your meat well, you must add a certain quantity of '*nitrate of potash*.'" For my part, I protest against such indefinite and far-fetched directions; our honest farmers want something more definite and *rustic*. (*f*)

But I beg you, do not consider me as acting from selfish motives in this uncouth attack upon better pens than mine. I refer not to the articles themselves wholly, for there is merit in them, but to the big words with which they are encumbered, as a common complaint among men who would otherwise be glad to avail themselves of the advantages of "book-farming."

Much has been done to stimulate the farmer to new and improved action; many a dark and barren corner has been illuminated with the light shed abroad through the medium of our agricultural works; but much, very much yet remains to be done, and as we are stern advocates for improvement, let us if possible improve this branch of our work also. I have already gone beyond my prescribed limits, yet one word more and I have done.

In the present enormous rates of *postage*, I believe we have another serious drawback to agricultural prosperity; inasmuch, as it positively excludes a more extensive communication between farmers who live remote from each other, but who would correspond more freely were it not for this unjust and impolitic tax. And judging from actual intercourse, I believe I speak the sentiments of the mass of the people in our section of the country, when I repeat that the present postage tax is unjust, outrageous, and impolitic. Years ago it took two days to go from our place to New York, and return; now we go and come in a little less than four hours. Then the fare was $3, now it is $1. But the postage for a letter is still the same! And I think I do not err when I say, that there are as many letters carried in private pockets as by mail—and why not? behold the facilities for so doing. The people to a man consider the law oppressive, and are ever ready to relieve each other from its yoke. (*g*) W. D.

Morristown, Morris Co., N. J., Aug., 1844.

(*a*) We can fully sympathize with our correspondent in his indignation against "scientific" terms; for we well recollect when a youngster, on first taking up a work on scientific agriculture, of being wofully nonplussed in almost every sentence, and after studying over a few pages, throwing the work down in disgust, and then seeking relief from the dry, *non-understandable* book, by an active exercise with some agricultural implement in the field. Time, however, and reflection at length convinced us of the folly of such an exclusively practical course, and in maturer years we found that we must not only read but *study*, and that *hard* too, if we ever expected to become a good farmer; and as appropriate to this subject, we beg leave to quote two short sentences from the Comic Blackstone, over which our correspondent will doubtless have a hearty laugh, as we did on first reading them.

"Servius Sulpicius, a patrician, called on Mutius Scævola, the Roman Pollock (not one of the firm of Castor & Pollux), for a legal opinion, when Mutius Scævola thoroughly *flabbergasted* Servius Sulpicius with a flood of technicalities, which the latter could not understand. Upon this Mutius Scævola bullied his client for his ignorance; when Sulpicius, in a fit of pique, went home and studied the law with such effect, that he wrote *one hundred and fourscore* volumes of law-books before he died; which task was for what we know, the death of him."

Now it is quite impracticable, as we have frequently remarked, to write upon certain subjects of agriculture, without the use of "scientific or hard" words, the hardness or science of which is nothing more than this—that they have not yet become common or familiar among the farmers; and although we may not expect every one who gets "*flabbergasted*" with scientific agricultural terms, to sit down to years of hard study, and then write 180 volumes as Servius Sulpicius did; yet the farmer may do something to obviate the difficulty during the long winter evenings by endeavoring to familiarize himself with them by careful reading. There is scarce a village in the country which can not furnish some tolerably scientific educated men; let these form themselves with the farmers of their neighborhood into a club to meet once a week for mutual instruction, and in six months they will all acquire knowledge enough of agricultural chemistry and geology, to enable them to fully understand Johnstone, Liebig, and the other writers of the day, and read them with pleasure. We can see no other help for the matter. The terms used in chemistry are just as necessary as to say in describing a cart, this is the tongue, this the tire, the felloe, the hub, the linch-pin, &c.

(*b*) "Saline matters" do not mean salt simply, but may be defined as substances having the composition of salts; that is, formed of a base and acid. Their number is very great; indeed, divided into their various families, they are almost innumerable—one may reckon up several hundred right off. But in agriculture we recognise two classes of salts; those present in the soil and constituting the food of plants, and those giving value to manures. The saline matters of the earth are carbonate of lime and magnesia; sulphate of lime; phosphate of lime, magnesia and iron; silicate of potash, soda, and lime. Other salts are either infrequent, in minute and fluctuating quantities, or of no interest to agriculture. In the whole of Dr. Gardner's communication, the foregoing bodies are clearly designated as the saline matters under consideration. We recommend C. D. to get some one to explain the articles on Tobacco to him. We consider them highly valuable; yet regret to say, that although of paramount interest to the tobacco-grower, there is not probably one in a hundred but will turn away from the scientific terms in these articles with disdain, and leave them unread, when they ought faithfully to study them, till complete masters of the subject. By so doing they may derive thousands of dollars of benefit from what Dr. Gardner has so briefly written upon tobacco. While we would recommend to all writers upon agriculture to use the plainest and most simple language possible to convey their meaning, our readers must not complain if we occasionally get them "flabbergasted with a flood of technicalities;" hoping, thereby, if no other result comes of it, that we may "pique" them to become more intelligent farmers, if not learned men.

(*c*) The common dictionaries very imperfectly explain scientific terms, and for this purpose it would be well for every agriculturist to possess Johnson's Farmer's Encyclopedia, a work of about 1200 pages, double columns, octavo. But as the cost of this ($4) is rather more than many can afford, it is Dr. Gardner's intention to soon publish a cheap little work, familiarly explaining the scientific terms of agriculture.

"Ammonia," says Johnson, "was first prepared in the east from camel's dung. It is known in commerce under the name of *hartshorn, sal volatile*, &c., and is prepared by the dry or destructive distillation of animal substances. It is composed of:

Hydrogen, - - -	0.125
Azote or Nitrogen, - -	1.75

"Fresh urine contains phosphate of ammonia, muriate of ammonia, and lactate of ammonia, and there is perhaps no fertilizer more powerful in its effects than this."

Johnson devotes three broad pages of his work to an explanation of ammonia, its effects on vegetation, &c., &c. How was it possible, then, for Dr. Gardner, in writing his essays on tobacco, to do more than make use of the word, presupposing that his readers understood what he meant? He might with as much propriety be called upon to define the word "tobacco," itself. We will farther add, that ammonia is found strongly *perfuming* the air of a horse-stable and privies, especially if closely confined; rising up from manure heaps and decaying animal matter; at gas-works, &c., &c.; for all which information, ladies who carry *hartshorn* in smelling bottles, will not probably thank us for detailing; yet if it will only cause them to throw the vile, unhealthy things aside, we shall be glad; for we have no more affection for the smelling bottle than we have for the segar or tobacco pipe.

(*d*) Perhaps C. D. may not be aware of it, but we have often heard certain hard-fisted farmers complain quite as much about plain, practical articles, as others do about scientific ones. They say on reading them, "Well, you have told us nothing new now; we were aware of all that simple business before; you can't teach us anything from books, no how."

(*e*) It is a superb plant, full grown, and bears a handsome flower; but here ends our admiration of it, and we wish we could say that we had never seen it snuffed, or chewed, or had its noxious smoke puffed into the air we are often obliged to inhale. It is a thoroughly disgusting weed after being dried, used in any way or form; and we wish that our lot had been cast forward to live in a more refined age, when the loathsome thing, as we hope, will be utterly abominated, and the millions which are now spent in the filthy habits of smoking, chewing, and snuffing, will be appropriated to enlighten the minds and reform the hearts of our people, and thus better fit them for a pleasurable, moral, and intellectual existence.

(*f*) In what C. D. says here we perfectly agree with him, and writers who use far-fetched or uncommon words to express their ideas, when more simple ones would better answer their purpose, remind us of the high-flown language of a certain lady, who thus reproved a gentleman for saying, "You know, madam, that you can not make a purse out of a sow's ear."

"Oh, sir, please fan me! I have intimations of a swoon! When you use that odious specimen of vulgarity again, why don't you clothe it in a more refined phraseology? You should have said, it is impossible to fabricate a pecuniary receptacle from the auricular organ of the softer sex of the genus *sus*."

The London Punch thus humorously hits off learned terms in his "Farmer's First Lesson in Chemistry:"

"Chemistry is keepun' a doctor's shop. An atom is a mossel o' zummut; a bit o' dust or zand, loike. The weight of an atom is the heft on him. Light is accordun as it med be; day-light, moon-light, or candle-light. Heat is that are as come out o' the vire. The effect of heat is, rooastun' mate, bilin' 'taters; burning your vingers if you gets too cloase to 't. Lightnin' is a thunderbolt fallin' out o' the clouds; a thunderbolt is a thing like a clinker. An acid is any sort o' zour stuff, like vinegar or varjus. An alkali is a foreigneerun' name vor zummut or other, may be for a *pig!* Potash is ashes from *under a pot!* Soda is stuff as washer-women uses. Ammonia is one o' them fine names as your gentlefolks gives their darters. If you puts zulphuric acid to lime, and makes zulphate o' lime, why, of coorse, if you adds it to wuts (*oats*) you gets zulphate o' wuts. A simple body means a zimpleton, like Zilly Billy at the Poorus. The laws of Chemical Union is like the laws of any other Union, pretty strictish, and o' coorse every Chemical Union has got a Beadle. Chemical Affinity, Attraction, Cohesion, Composition, Decomposition, Analysis, Synthesis, is a parcel of outlandish gibberish. Justus Liebig is zome Vrenchman," [or as others assert, in great wrath, Liebig is a—Big-lie.—Ed.]

There, we think Mr. Punch, in his witty caricature, has pretty well revenged our correspondent upon all agricultural chemistry.

(*g*) As to the enormous rates of postage, we go the whole length with C. D. against them, and have frequently expressed ourselves in the strongest terms on this subject in the former volumes of our work. We say, *abolish the franking privilege entirely*—not even allowing the President of the United States, or any of his Secretaries, or the Postmaster General, to frank a single line. Next, reduce the charges of letters to the lowest possible rates at which they can be carried, which we now think might be 5 cents for 250 miles; 10 cents for 500 miles; and so on, 5 cents extra for every 250 additional miles. Then whatever postage should be fairly charged by the different officers of the government, let the same be paid out of the United States Treasury. The franking privilege is the great curse of the country, and seven eighths of the weight of the mails during the session of Congress, is taken up with printed matter; too much of which is miserable dull stuff, or vile, lying political documents, franked by some demagogue to subserve his own selfish purposes. We believe now that the people are pretty thoroughly aware of this, and will rise in their might at the coming session of Congress, to compel the reform which has so long been denied them. Let them send in their petitions from every quarter.

Guinea or African Goose—Fig. 58.

GUINEA GOOSE.

This is the largest of the goose tribe which has fallen under our notice; it is of the size of the swan, and it often weighs more than 25 pounds. We have now in our possession one pair which we purchased for a gentleman in South Carolina, which will weigh in common ordinary condition, over 20 pounds each. We once owned a gander that weighed 24 pounds. They are a noble bird, quite ornamental about the premises, and add much to the scenery, particularly if a sheet of water be near. When floating on its surface they have a stately majestic appearance, and in their movements they much resemble the swan. They have a low, hollow, coarse voice, unlike that of any other variety.—[*Bement's Poulterer's Comp.*

YOUNG ORCHARDS.

These should stand for many years in plowed ground, which gives them, if well cared for, a rapid and vigorous growth. If they do not bear so soon as you desire, from the too strong pushing out of wood, do not resort to *root pruning*, as some recommend, which I consider an expensive, useless, and injurious operation; but lay down your orchard land at once into grass. This will effectually check the rapidity of its growth, and set the trees in bearing. The grass, binding down the surface, and checking the activity of the roots, will at once change the action of the sap, and set the buds into fruit immediately. Such, without going into the chemical reason of the process, is my experience from actual trial.

I have the past spring had inserted about 3,000 grafts. Nearly 500 of them were put into the branches of trees from 4 to 9 inches diameter in the body, which I removed from a scattered plantation into an orchard; 500 more into stocks of 1 to 2 inches diameter, newly planted out; and the remainder into stocks from 1 to 2 inches through, sawed off at the root and planted into nursery rows for future use, all intended for my own planting, and mostly the best kind of winter apples. The stocks are, to appearance, all alive and growing well. The season has been quite favorable, being very wet. I have no doubt of my success. In every instance the stock was sawed off, and split down, one or two grafts inserted according to size of stock, or limb, well waxed, and left to go on its way rejoicing. The grafters charge from 1½ to 2 cents per scion for doing it—a round price to be sure; but one had better pay it and have the work well done, than to do it himself in a bungling manner. Grafting, however, is so simple a process, that every farmer should understand it. It will save him much trouble and expense, and give him abundance of good fruit.

Putnam.

MECHANICS IN MASSACHUSETTS.

I have found many, if not most of the mechanics in this State own a little land—some more and some less. They keep a cow, a couple of hogs to make them family pork, raise all their garden vegetables, and as much corn as they want to use of this kind of grain, usually getting at the rate of a hundred bushels per acre, and much fine fruit. Some of their land pays them the interest of $1,000 an acre, over and above all outlays. I saw a limb of a quince tree, 19 inches long, not larger than one's little finger, on which I found quinces of the largest size. I have seen some of these grounds which would do credit to a gentleman living on his money. Occasionally they are embellished with a green-house, and everything in and about their houses is neat and clean; and instead of decanters of cider, brandy, gin, and New England rum, as formerly, you find their side-tables covered with books, and among them frequently two or more agricultural papers. Their sensible conversation gives abundant evidence of having read these faithfully; nor are they indifferent to the state or county agricultural shows. This propensity extends to journeymen as well as to masters. Two young men had engaged to make and deliver two cases of men's stout shoes, commonly called brogans, of 30 pairs in each case, and they had only six days to do them in. (*a*) The Worcester county agricultural show was to be held on the fifth day, yet such was their anxiety to attend it that they finished the shoes, averaging 15 per day, and delivered them in Worcester on the fifth day morning, took their pay and deposited it in the savings bank, and were as busy and as much interested among the cattle and crops as any of the farmers, making calculations no doubt for a few acres of land, a snug cottage, and what is still better, a wife to adorn it and make them a happy home. A TRAVELLER.

(*a*) The leather for these shoes is prepared by cutting it out of the sides of both upper and sole leather, and rolling the sole instead of the old custom of hammering it upon a lapstone; then cramping both uppers and unders in proper shape to put together, which is understood to be making or finishing the shoes as above stated.

ODD ROWS OF CORN.

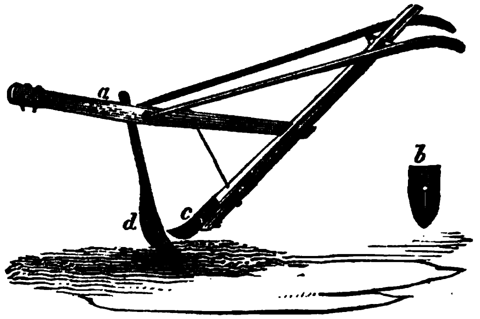
YOU request some of your Ohio correspondents to inform you whether you were correct in supposing you had seen ears of corn with 8 to 24 rows. Undoubtedly. This is no uncommon thing even in this latitude, 41°, 30′, considerably south of the "Miama and Scioto Valleys." My father has raised a great deal of the corn noticed by J. S. S.—the "yellow gourd seed;" and I have counted hundreds of ears that had 24 rows. Corn generally (not always) has 8, 12, 18, or 24 rows, but always an *even* number. What J. S. S. states is true in every particular. Sometimes rows will stop one third, and sometimes two thirds of the distance (more or less) from the butt end of the ear; but always two rows will stop together—not two adjoining rows, but rows usually on opposite sides of the ear. They terminate with a three-cornered kernel, neatly fitted to the kernels of the adjoining rows which converge and extend on. And the same is true of ears that enlarge toward the top end, sometimes to 40 rows. I have seen ears that lost some of their rows, say at a distance of one third, and then resumed them, and even added more near the top and, thus showing the effect of the season (or something else) upon different parts of the ear, but always, I repeat, with *even* rows. We used to save our seed from ears that had this increase at the top end; but I can not speak positively as to any beneficial results, because it was not compared with any other plan. I only know we had many such ears, but whether from the influence of the *seed* or the *season* I can not say. The idea of "21" rows on an ear is remarkable for nothing except its being an odd number. And for this I must think Mr. Allen mistaken, even though he "counted them *twice*." Such an ear would certainly be a curiosity to one who is in the habit of observing nature's operations. T.

Ohio, August, 1844.

SOUTHERN AGRICULTURAL IMPLEMENTS.

NO. II.

Tending Cotton.—The first implement required after the ground has been well broken up by the plow, and made free from clods when necessary, by the harrow, is something to open a wide shallow furrow, or more properly a drill, to receive the cotton seed. Various openers are used for this purpose, but I have seen nothing which answers so well as a small bull-tongue which is shaped thus:



BULL TONGUE PLOW—FIG. 59.

a is the plow; *b* the bull tongue, 7 inches by 4, and formed slightly scooping, and fastened to the share by a bolt passing through the hole at *c*.

And here I may explain to you, that this simple implement is one of the very best, and most generally useful that I have ever seen, and in very common use, in its different varieties, both in the south and west. The shovel, only, differs in size and form. For breaking up ground, for which it is preferred by a great many, the shovel is made large, and shaped more like the letter V, the wings, as in all shovels, falling off, the shovel being ridged in the middle. A coulter set in the usual way is frequently added, and is a valuable addition. To form the *jumping shovel*, a sharp, rounding-faced coulter is set in, as represented at *d*.* For opening a furrow to plant corn, and for running round corn at its first tending, a long, narrow bull-tongue is used, with a coulter to steady it. Our friend Major Winston, of Newport, Ky., uses the common large shovel exclusively in tending his corn, and makes excellent crops—an argument it seems, against *surface culture*.

The seed, when scattered in this furrow (almost always, by the way, in too great quantity,) is covered by a triangular, wooden-toothed harrow, with a roller attached. This roller should be of cast iron, at least 12 or 14 inches in diameter, and some 18 inches long, and will weigh perhaps 150 lbs. This may be considered by some as too heavy; but they must bear in mind that the greater the diameter, the greater the extent of surface upon which it rests, and therefore the weight must be increased proportionably. The advantages of increased diameter are the great lessening of draft to the horse, and the application of a more direct perpendicular pressure. The roller may be so cast as that its weight may be increased for light sandy land, and very dry weather, by being filled with sand or mortar. Few complain, even this year, of a poor stand, who have used such rollers or their equivalent.

---

* This form (the jumping shovel) is invaluable for breaking up new cane land, and indeed, in new land of any kind that is full of roots. It cuts a great majority of them, and when it comes to one that is too large, it slips over, and instantly enters again.

When the young plant bears from two to four leaves, it is *cut out* or *scraped* to a *double stand*, leaving plants at half the distance they are intended ultimately to stand, and scraping the sides of the ridge clear of the young weeds and grass. This is most commonly done with the hoe. Some use what they call *scrapers*, which I find greatly facilitate the work. Unfortunately I have not one at hand to copy from, and I am not artist enough to give you a sketch without.

Previous to scraping, whether with the hoe or scraper, it is customary to *bar-off* with a plow, casting a furrow from the cotton on each side, and generally within four to six inches of the plants. When there has been much rain, or the ridge is very foul, this is indispensable; but in such a season as this, I think it a ruinous practice. To enter upon this subject would lead me off too far from the one now in hand. I would just advise planters and overseers to examine the roots of a plant of cotton, at this age, and see what a small proportion the top roots bear to the horizontal ones, and to what a distance these last extend, and *especially in a dry season*, and they will be very careful how they permit those roots to be laid bare.

To *dirt* the cotton, as it is termed, after cutting out, a common turning plow is generally used. I am now using double half-shovel plows, warmly recommended to me by Dr. Phillips, and Mr. Hamilton, spoken of above. Dr. P. sent me one to work from, and with the aid of an ingenious mechanic in my employment, Mr. Dubois, I have had a lot made, with *cast* shovels, of which I have tried to make you a sketch, but can not succeed to my mind. They consist simply of two cast mouldboards, with points, cast all in one, but no landside, and are stocked like a shovel plow, the beam being made broad enough to have two chips or uprights attached, the one behind the other, to each of which is bolted, with a single bolt, one of the shovels spoken of. Each shovel cuts about seven inches, the plow thus clearing about sixteen inches, and throwing a little mellow dirt very nicely to the young cotton plant. During a wet season, when crab grass (or crop grass) grows with such rapidity as to form a pretty good sod between each tending of the crop, this implement does good work. I find, however, I am carrying this epistle to too great length, and will merely add, that I have succeeded in having the single shovel, or bull-tongue, made of cast iron; the sweep and cultivator teeth all doing excellent work. My cultivator teeth I consider a decided improvement.

Trial of Plows.—Since writing the preceding, I have had another trial of plows. I was breaking up a piece of ground, part of an old field, which had lain some three years undisturbed, during which time it had been trodden by stock in all weathers. That ground I have just planted in corn and peas. My first planted corn having *shown its silks* the 21st of May, I had three plows running—Ruggles, Nourse, & Mason's Eagle plow, with a pair of horses; Hall's No. 2, and Sloop's No. 2, each drawn by a pair of mules. I was with them three fourths of the time during three days, with foot-rule in hand, making frequent measurements and notes. I may rate the entire average furrow of the Eagle at 12½ by 6½ inches; the Hall and Sloop each at 8 by 6 inches—the Eagle running perfectly steady, and leaving the plowman nothing to do—the others jumping out and in, varying greatly in their work, and throwing out large *chunks*, as the plowman expressed it, every now and then. The Sloop plow required least draft, *decidedly*, next Hall's, and last the Eagle. Hall's is the best tending and ridging plow. I found the draft of the Eagle plow much increased and that of either of the others proportionably diminished, when I permitted one of them to follow the Eagle plow round, depriving it of the advantage it gains by cutting out some inch or two of earth from under the next furrow. I should say that the Eagle plow was made specially with an eye to being drawn by oxen, as the quick walk of my horses caused it to turn its furrow badly, now and then. I have broken up a piece of stiff Bermuda grass sod in fine style with this plow—a thing I could not have done with any other plow I have.

I have said this much of Messrs. R., N., & M.'s Eagle plow, because it is the first really *first-rate* implement I have had in my hand in the south. That there are others equally good I think quite likely, but I must see them together to be satisfied of the fact. You speak of the subsoil plow of the same makers. I find that my cast bull-tongue, run after a good plow, and drawn by a good team, makes quite a good subsoil plow. Stir up your makers of plows and other implements, not forgetting Bachelder's Planter, to send on specimens to our fall trial. Ship to Wm. J. Minor, Esq., the President of our Society, so as to reach here by the 15th October, *at latest*. They will reach us, of course, free of charge, or at at all events with instructions to pay charges out of price of implement, if sold. Full justice shall be done everything that is sent. I should like to have a good small woodcut, or cast of cut, with each implement. You shall have a full report of the trial. Please let us know if a perfect, or good dynamometer is yet made, by whom, and the price.*

THOMAS AFFLECK.

Ingleside, Miss., June, 1844.

---

*We know of no really good dynamometer which can be depended upon, and shall be obliged if any of our readers can inform us.—[ED.

CLAY LAND FOR GRASS.

There is an unwarrantable prejudice existing among our farmers generally, against clay soils, although when well situated, and properly managed, they are universally acknowledged as the best for wheat, and for grass. I have had some experience in this matter, and as I speak, like Othello, "only of what I do know," I will state a few facts which have occurred under my own eye.

You know that the beautiful position you lately occupied on the Niagara river, three miles below my own residence, is now owned by Dr. Lyman, who purchased it last year. This farm is a stiff, unyielding clay; its only objection to any one desiring a delightful country residence. When you came into its possession, it had been for years "deviled over"—(a very significant phrase)—and the fields yielded only a miserable bite of blue-grass *(poa pratensis)*, moss, and fivefingers. These fields were plowed up at once by you, and put into a rotation of root and grain crops, and fed with a small quantity of manure from the stables and piggery, and as soon as leveled, and laid into suitable lands, seeded down to grass—a mixture of clover and timothy. I was there the other day, and looked over the grounds. They have had no top-dressings, and but little manure, as I understand, from any quarter. But the grass crops are beautiful. The mowing land will cut from one and a half to two and a half tons to the acre, and of the finest quality; free from weeds and foul stuff of any kind. The soil is almost a dead level, and all that has been done was to throw the land into beds, or ridges, say fifteen to thirty feet wide, with the plough, and carry off the falling water into the natural ravines by the same process. *(a)*

I know no good reason why this land will not, with either the after-math occasionally left for a winter covering, and top-dressing, or a slight coat of stable manure, say ten cords to the acre, once in four or five years, applied either in the early spring, or immediately after mowing in summer (I like the latter best, as the wheels are apt to cut the soil in the spring), last an interminable time in grass, and yield the finest crops. Many fields of like character in the neighborhood have produced grass abundantly for years, without either top-dressing or manure of any kind, and under the worst possible management. An instance I give you:—the Morehead farm, just below your late residence, has long been neglected. It has been regularly mowed every summer (and yet at this time has a crop of one and a half tons to the acre standing upon it), and immediately afterward, cattle have been turned upon it, gnawing it down to the ground before winter. Still it yields well. The soil is a stiff clay. On this place, eight or ten years ago, was a brick-yard. After two or three years' working, it was abandoned, by merely discontinuance, the old clay-pits, the brick-bed for drying, &c., left, and not even the miserable spiked rollers with which the clay was mixed, were removed. The old drying-bed, in particular, stood conspicuous for several years, a dry, red, arid object, packed as hard as pounding, rolling, and a continuous tramping of years could make it, and the subsequent neglect of the "skinning" tenants would permit. In three or four years, however, the timothy and clover began to show, coming from seed lodged by the wind, or by cattle lying upon it. The result is, this old brick-bed, lying high and dry (for it had to be made so to dry the brick), has been for several years past the *most productive* piece of grass ground within my knowledge. Every year when we have a fair quantity of rain, it yields at the rate of two to three tons to the acre. The patch is, perhaps, a quarter of an acre in extent. I passed it yesterday, and although not fit to cut for a fortnight to come, it is lodging with its overgrowth; and the surrounding grounds have a crop of full one and a half tons to the acre, and not a spoonful of manure has been put upon any part of it, but what the cattle have dropped in feeding on it. So of all the lands in the vicinity—a stiff, clay soil; and, shame to their owners! a single soul of whom does not reside there, leaving the farms to be skinned and "deviled" over for the past twenty years. I really do not know of so good a speculation as these lands would be to enterprising farmers, who would come and purchase them at fifteen to twenty dollars the acre, as they may be had, and all too, within six to ten miles from the centre of the populous city of Buffalo, fronting on the Erie canal. But "the west" is all the rage; and when the emigrant once starts "from the east," no temptation will stop him short of his cherished *El Dorado* in Wisconsin, or Iowa; even Ohio, Michigan, or anything short of the extreme west, although millions of acres of their good land are yet unsettled, are also passed over, having become "an obsolete idea."

But to the clay soils. I much doubt whether we have, in America, ascertained the true value of these lands. The farm I cultivate, although of considerable extent, has a diversity of soil, consisting of sandy and gravelly loams, clayey loam, and a red, stiff clay. I have ploughed and cultivated them all. The sandy and gravelly loams work the easiest and freest; they are better for roots, that is, in the working. So are they the easiest plowed; but they require the most manure, and retain its virtues the shortest time. The clayey loams are decidedly the strongest, and without manure yield well for many years, both grain, grass and roots, and with a slight sprinkling of dung throw up a heavy crop, and retain its benefits for years; while the stronger and unyielding clays, in good seasons, when full plowed and properly treated, yield good crops of grains, but laid into grass, produce both pasturage and mowing unsurpassed in quality and luxuriance. Nothing but long and severe droughts affect them. They then crack, and the grass ceases to grow; but a slight rain reinvigorates them, and they produce *more* bountifully than any other lands within my knowledge.

This, however, is a secondary and a limestone region. Our soils are mixed, more or less, with lime, rendering them strong and enduring; yet I have little doubt that the clay soils generally in the United States and the Canadas are both productive, and permanent grass lands; and with proper care and attention, and that of the cheapest kind, will yield more in proportion to their generally estimated value than any other lands in the country. Let me give another instance:—I have a small piece of heavy clay land near my residence, say three or four acres. Before I came into possession of it, some seven years ago, it had been miserably neglected. It produced nothing but moss, fivefingers, and strawberries, and was gnawed to the very dirt by horses and hogs. It had *never been plowed*, but was well situated to drain. I drew one or two slight ditches through it with the plow, scattered some hay chaff over it, spread over a tolerable coating of stable manure, and ever since it has annually yielded two to three tons of hay to the acre, growing so stout that I have usually had to cut it before it was properly ripe, because of its lodging.

I have been told that much of the fine grazing and extensive county of York, in England, as well as the principal parts of Durham and Northumberland, adjoining, are heavy clays. *(b)* These are the great grazing counties, where the massive Short Horns are bred in the highest perfection; where thousands of Scotch cattle are annually grazed by the farmers; and the enormous dray-horse and Cleveland bays of England are produced. These, too, are the most northerly counties of England, and severe in their climates; yet their pastures are the most productive. And these heavy soils, I learn, were among the last to be appreciated; but when their value was ascertained, they at once took rank in value with the most favored soils of the kingdom. Will it not be so with the clays of America? Let them be analyzed, their constituent parts ascertained, and I have little doubt, in process of time, with the aid of right cultivation, and cheap, yet friendly stimulants, these, to many disagreeable and repulsive soils, will become among the most desirable and profitable in our country. L. F. Allen.

Black Rock, June 26, 1844.

(a) In addition to laying up the land in beds, with wide open furrows left between them, wherever any spot was so low as to retain the surface water, we made with the plow and road-scraper, an open ditch from such low spot to the main ravines running through the farm, for the purpose of drawing off the standing water.

(b) Parts of these counties contain the stiffest clay soil we ever saw cultivated, except in the low grounds of Staffordshire. In our drier climate, we are confident no crop except hay could be profitably grown upon them; and even in England, they pay much better to be kept constantly in grass. We examined lands of this description which had been kept in grass for centuries, and they were among the finest and most productive meadows that ever fell under our observation. It is considered fatal to break them up for hoed or grain crops, and then re-seed; for it would take a century to restore the grass to its present state of perfection. We were shown different fields of grass which had been broken up and re-seeded, twenty, forty, sixty, and one hundred years ago, and the difference in the quality and product of grass in them was very great. The longer they remained in grass the better they grew.

ADVICE—FINDING FAULT.

It is the province of an old man to give advice and find fault. First, then, for advice: purchase no more land than you can make productive. Land doubles its first cost, on an average, once in nine to eleven years, by reckoning compound interest on first cost, together with taxes and other contingent expenses; so that if you pay $10 per acre for your farm, in ten years it will stand you in $20; in twenty years, $40; in thirty years, $80; and in forty years, $160 per acre! I mean on that part of it which is *unproductive*. What an enormous sum! and how few think of it who are ambitious to be the owners of large tracts of land without regarding the profits of its cultivation!

It has been a principle laid down in British husbandry, in renting their estates, that "no land be intrusted in the hands of men who have not capital, skill, and industry, to cultivate them with profit to themselves and the community; nor to suffer any man, let his capital be what it may, to hold more land than he can personally superintend, so as to pay the requisite regard to the minutiæ of cultivation." But in this country, it may be said, it is far otherwise than in England; land is bought here for the purpose of making an investment of money, looking for a profit on the rise of it. Understand, however, that I am not giving advice to speculators, nor writing for their benefit. I have known $2 per acre paid for land forty years ago, and the land is now in the same family, and could, not be sold at this time for that price; and many an instance have I known where families have been land-ridden all their lives, and kept poor by purchases made on speculation. But this has nothing to do with my present purpose; speculation has had, and always will have its votaries and victims.

I now proceed to find a little fault.

My business called me, a few days since, to visit a farm containing about 300 acres of cleared land. The barn was a noble one; in the yard of which was deposited, as near as I could judge, one thousand loads of well-rotted manure. While standing and gazing with astonishment at such a sight, an ox-wagon with two large yoke of oxen attached, was driven through it into the barn, to take on a load of grain, the wheels sinking nearly to the hub, and the oxen up to their knees. I found, on inquiry, that this had been accumulating *four* years, and the heaps of manure all round the barn were in such piles as to make it difficult any longer to pass the dung from the stable through the windows.

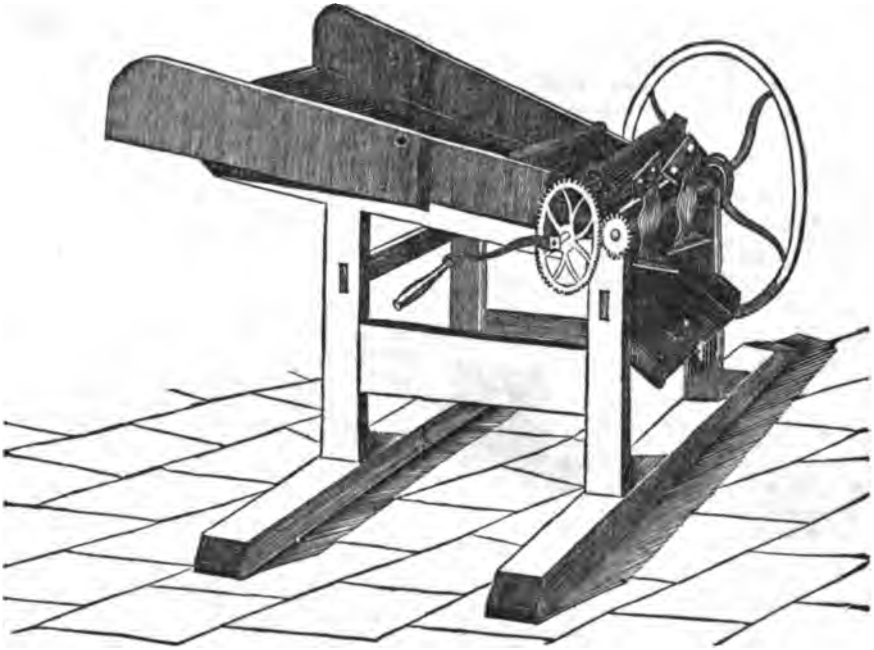
From the barn I passed over a considerable part of the farm, by which I was convinced that the land was not suffering for *want of manure*, for such clusters of burdocks I have never before seen! The stalks at the root were nearly as large round as "a piece of chalk" (and as much larger as my readers may please to imagine), while the branches were sufficiently spread to shelter calves and sheep; and the way their hair and wool were burred up was a caution! The noxious weeds in many places were equally prolific; and then the way the sprouts were shooting up from the old stumps, would have *cheered* the heart of any one who is fearful that this country is going to be short of wood in a few years. More than two hundred tons of good English hay have been cut upon this farm in a single year, and pasturage had the same season in proportion, and equally abundant crops of grain; but the meadows now are running into spear and other grasses, and many acres are not worth mowing. There are two farms adjoining in a far worse condition. I need not say, they all belong to non-residents, and the tenants have their own way of managing them.

OCTOGENARIAN.

BOTTS' STRAW-CUTTER.

I AM much obliged to you for the kind offer contained in your note of the 9th, and most gladly avail myself of the opportunity afforded by your popular journal, to extend a knowledge of the merits of my straw-cutter. I herewith send you a pretty faithful illustration of the implement.

The history of the cutter is simply this:—As a practical farmer, I felt the need of a simple and efficient cutter, that should come within the capacity of a common laborer. I purchased a great variety, consisting, of course, of those of most celebrity; and while I found many that operated sufficiently well as they came from the hands of the manufacturer, I met with none that retained its capabilities in the hands of the common farm laborer. I moreover remarked, that the instrument usually began to depreciate just after the first grinding and readjustment of the knives. I therefore set my wits to work, to see if I could not devise a knife, the feeding apparatus of which should be simple and permanent, and the knives of which should be readily ground and adjusted by the commonest capacity. These two points I thought were to be desired, even if they could be obtained only at the expense of a little facility and rapidity of execution. After much expense of time and money—more, I fear, than I shall ever be repaid for—I flatter myself I have obtained these objects; and I have also been fortunate enough to combine with them, if not the greatest rapidity, certainly sufficient speed of operation to satisfy the most impatient temperament. The feeding apparatus is, I believe, the most perfect and durable I ever saw. In four years' experience I have never known it deranged in the slightest degree. The cutting part consists of four knives, about four inches square, as flat and straight, and as easily ground, as a plane iron. In short, without wishing to disparage other cutters, many of which have great merits, and some, too, that I can not claim for mine, I think I do not arrogate too much when I say, that this knife is better adapted to the farm laborer, of the *south* at least, than any other in use. At any rate, I can procure certificates, if necessary, from hundreds of the best farmers in Virginia, bearing me out in this opinion.



BOTTS' STRAW-CUTTER—FIG. 60.

Mr. Ellsworth, the Commissioner of Patents, advised me several years ago to patent this knife in England. He has had one in use for several years, and I know entertains the highest opinion of it; although motives of delicacy prevented me from asking, as it would undoubtedly prevent him from giving, a certificate of the value of any implement in his office. It was only yesterday that Mr. Stevenson, the ex-minister to England, who, I assure you, sir, deserves to rank as high in your esteem and mine, for his devotion to agriculture, as he does among the statesmen of America as a politician, not only advised, but urged me to take this cutter to England, in the kindest manner offering me letters to his friends there; being pleased to say, that such an improvement in agricultural implements would, of itself, afford me an introduction to Lord Spencer, more potent than a letter from any diplomatist in Europe.

I have now, in pursuance of your suggestion, made this statement with respect to this knife. If you think it will add to the gratification or instruction of your readers, you are at liberty to publish so much of it as seems meet unto you.

C. T. Botts.

Richmond, Va., Aug., 1844.

We take great pleasure in saying, that we have examined the above straw-cutter of Mr. Botts, and think it the best contrived for the southern States of any that has yet come under our notice. It combines great strength with simplicity, and is just the thing to be placed with the careless hands on a plantation. Mr. B. expressed the fear that it might not be strong enough to cut the large corn-stalks of the south. We have none whatever on this score, provided they do not exceed *three* inches in diameter, and are not over *twenty* feet high, as a gentleman, when we were on the Mississippi, *modestly* assured us they thus grew to shelter "bar" (bear), like a cane-brake in Arkansas. Mr. Freeborn of this city has the above cutters for sale—price $27 50.

FRUIT GARDEN OF DR. RHINELANDER.

On a recent visit to Dr. Rhinelander, of Huntington, L. I., I found so much of successful experiment in the cultivation of fruit, that I deem it scarcely fair that horticulturists should remain in ignorance of his exertions. The Doctor having, a few years since, exhausted the field of medicine, and imparted his varied knowledge to a numerous class of pupils, retired to his present residence, and turned his attention wholly to the study of horticulture, and more particularly to the cultivation of grapes and stone fruits, the latter well known as subject to several diseases. Having but little previous knowledge of fruit culture, he studied it as a science founded on correct principles, and of his entire knowledge of those principles, his great success is the best evidence.

He treated his trees as he did his patients. He could not, it is true, give them calomel, jalop, or salts, but he purged them in an equally effective way; and so thoroughly has this cathartic treatment driven disease from them, that he is enabled to fruit plums, peaches, nectarines, and apricots, with as much ease as apples or pears. His soil is admirably adapted to the cultivation of those fruits, being of a gravelly nature, with a porous subsoil.

It is a generally admitted fact, that all plants discharge from their roots more or less excrementory matter, which, if left in the soil, is decidedly injurious to the plant from which it came,* although frequently beneficial to others. It is from this cause that successive crops of grain, or any other product, from the same soil, produce poorly, and that a proper rotation of crops is deemed indispensibly necessary to the success of every farmer. The plum and its kindred fruits discharge far more of this matter than the apple or the pear, and are therefore far more likely to be injured by its superabundance in the soil. A rich, heavy mould, or retentive soil, prevents its escape, while a porous, gravelly soil will allow the rain to pass through it freely, and wash away all offensive matter. As Dr. R.'s soil was of this porous nature, he had no difficulty of this kind to contend with, and directed his attention to other equally important points. The curculio is well known as the most serious enemy to the plum, peach, apricot, and nectarine. To put an end to their destructive ravages, Dr. R. uses clam and oyster shells, small stones, and similar materials, to make a hard, compact surface around the body of the tree, and as far as the branches extend. The benefit of this is obvious; the curculio deposites its eggs in the fruit, just beneath the epidermis, the worm from which makes its way to the stone, and along it to the stem, which when it reaches, the fruit falls, with the worm, to the ground. This hard, compact surface of shells, &c., prevents the worm, as it issues from the fruit, finding its way into the earth, there to remain until the next season brings it forth in the shape of a fly, to renew its depredations on the fruit. Having thus left the fruit, the worm finds no way to enter the earth, and is soon destroyed by the heat of a summer's sun. It is for this reason that stone fruits, which many find it impossible to perfect in this part of the country, succeed so well in New York, where a hard pavement surrounds the tree.

Having thus placed the trees in a condition to perfect the fruit when produced, Dr. R. endeavored to discover the most effective mode of rendering them very productive. For this purpose he has successfully adopted the *en quenouille* mode of training, and other ways of bending the branches of the tree from their natural position, that the sap, being furnished by the root faster than the unnaturally twisted limbs can dissipate it, becomes thick and forms flower instead of leaf-buds. I saw one plum-tree, about as thick as a man's finger, with two branches forking off and trained horizontally about a foot from the ground, which were studded with plums of rich and healthy appearance. He also practises a judicious system of summer pruning, which he finds far more important than winter pruning, inasmuch as the sap of the tree is thus economized and directed to the formation of fruit. His success is not with the plum alone; his peaches are as fine and healthy as I ever saw in New Jersey or Delaware. The apricots were equally promising; and the nectarines, which it is generally deemed impossible to perfect in the open air, show as fine an appearance as any cultivated under glass. Many of his trees had died after being planted several years, and he attributes it to their having been inoculated on peach stocks. Too much care can not be taken on this point. The peach is, comparatively, a short-lived stock, and those who plant plum, apricot, and nectarine trees budded upon it, will frequently lose their trees just as they commence bearing. English gardeners will not use even the peach inoculated on the peach stock, and universally reject the plum, apricot, and nectarine, inoculated in that way. The peach stock is not only short-lived, but is preyed upon by a worm which does not attack the plum stock, and is frequently destroyed by its ravages. Dr. R. has also lost a number of trees by electrical changes in the atmosphere.

---

* We have seen this doubted latterly, if we recollect right, by no less an authority than Professor Lindley of England; also, by German vegetable physiologists.—Ed.

His vineries are perhaps more extensive than any in the state, and are constructed in a very cheap, but necessarily rough style. They are made of wood, each about one hundred feet long and twelve wide, with brick flues. The glass is at an angle of about 30°, and the vines are trained up the rafters, four or five inches from the glass. They are very thrifty and luxuriant, and filled with large bunches of the Black Hamburg, Muscat of Alexandria, and other fine varieties. He has a new variety of volute grape, which he has found perfectly hardy, and to mature its fruit well in the most exposed situations. It is very similar to the Muscadine in appearance and flavor, and will undoubtedly prove a valuable acquisition to our stock of hardy grapes. Dr. R. is also adopting, with every prospect of success, the plan of putting vines and stone fruits in pots. I shall endeavor to learn from him his success, and shall, in a measure, follow his example, and test under glass all our varieties of peach, plum, apricot, and nectarine. Dr. R.'s general success is such, that no lover of good fruit may despair of obtaining all that he desires; for when the soil is not suitable it may be made so, and the production will amply repay for the labor. All those who feel an interest in these things, will reap much instruction and pleasure from a visit to Dr. R.'s place, whose success in horticulture is only equalled by his hospitality and kindness; and those of strongly marked peculiarities will find in the Doctor an admiring observer.

S. B. Parsons.

Commercial Garden & Nursery, Flushing, L. I.

Since the above was in type, we too have been highly gratified by a visit to Reinland. It is a charming place, on a hill rising 150 feet from the shore of the inner bay of Huntington, and commands beautiful views of the sound, the opposite coast, and the country around. All that Mr. Parsons says of Doctor Rhinelander's success in raising choice fruits we found more than verified, and such a feast as we had there of the various kinds was a luxury indeed. His George-the-fourth peach is the most delicious we have tasted for years, and we give it the same rank among peaches as the Seckle pear has taken among pears. Then there was a magnificent great juicy peach, all white save slight specks of red, the name unknown, and others too numerous to mention. Several varieties of plums we saw there, large, rich, and juicy, were unknown varieties. The grapes were very fine; and among other things, strawberries, still ripening on the vines—the first week in September. The garden soil is a poor, thin gravel, and notwithstanding Dr. R. has applied little manure to it, the fruit-trees are remarkably thrifty and bear most abundantly. We found the lawn of superior turf, and coated with thick, fine grass. We inquired how this was produced, and were answered by the use of plaster; thus giving another evidence that this salt possesses fertilizing properties in the vicinity of sea water. The Hon. C. C. Cambrelling is a near neighbor of Dr. Rhinelander, and is said to have a beautiful place, which we much regretted we had not time to visit.

TOUR FROM ALABAMA TO TENNESSEE.

I was so fortunate, a day or two past, as to get hold of the August No. of the Agriculturist, and was pleased to observe, that you had received the sample of marl and the sample of cotton I sent you. The opinion given by Dr. Gardner of the value of the marl is the only data we have had as yet, although I have made many efforts to have its value known. I was in hopes that the blue marl would prove the proper manure for our sandy soils, still I have no doubt of the correctness of Dr. Gardner's opinion.

I will now give you some account of our trip from Eufaula, Alabama, to this place, and in doing this I will confine my remarks to such matters as alone relate to agriculture. We set out on the 24th of June. Our route for the first hundred miles was due west, and mostly over a new country. We passed a number of fine cotton farms in the county of Macon, in the neighborhood of Union Springs; indeed, the best cotton we saw on our entire route of 400 miles, was on what is termed the woodland prairie of Macon county, Alabama. On reaching Montgomery county, we passed one of the most beautiful sections of farming country I have ever seen. For 14 miles before reaching the city of Montgomery, it was one continued cotton and corn field—the cotton and corn looked well for the season.

After crossing the Alabama river at the city of Montgomery, our course was due north, until we crossed that bold and beautiful stream, the Tennessee. From Alabama to Tennessee river we saw but little that could interest a farmer; the distance is nearly 200 miles, over a poor, sterile country, except in the vales of the Cahawba and James Valley.

After crossing the Tennessee, we entered on the rich, level lands of Madison county. Perhaps few counties in all the southwest afford more rich and level lands than Madison. From Dillon's Landing to the beautiful town of Huntsville, it was one continued field for the distance of 11 miles, over a macadamized road; and what a pleasurable sensation we felt after having been jolted and tossed from side to side for 300 miles, to strike a perfect pavement—the carriage seemed to move forward without the least effort of the horses. After leaving Madison county, we passed through the county of Franklin, and on entering the state of Tennessee commence the rich lands of the west. In passing from Huntsville to Winchester, the county seat of Franklin, the scenery is most beautiful. The corn crop, which is the principal crop of the state of Tennessee, we found good; the price of corn generally is 50 cents per barrel, or 10 cents per bushel. We next entered on the still richer lands of the counties of Giles, Murray, Williamson, Davison, Rutherford, and Bedford, and to me, who had been all my life a cultivator of the light soil of the south, I was everywhere struck with the black, rich lands of Middle Tennessee—the fields groaning under the weight of the growing crop of corn—the large, fine cattle roaming over the rich clover fields—and I came to the conclusion, that if the farmers of Tennessee would determine to cultivate *less* land, study agriculture as a science, form agricultural societies, and read agricultural works, that they would be the happiest people in the whole country.

I must before closing mention the beautiful sewing silk made by the interesting and industrious daughters of Col. Nell, in the kind family we have spent the last eight days. One word as to the immense size of the trees of the west. Mr. James M. Shields, residing near Lynnville, lives in a house 46 feet by 18 feet, made out of one tree. I measured a poplar in company with Col. Nell, near his house, which was 25 feet in circumference, and we supposed it was 70 feet to the first limbs! ALEXANDER McDONALD.

Bedford Co., Tenn., Aug. 13, 1844.

CORN FOR SOILING AND FODDER.

I HAD read several accounts of Indian corn sown broadcast for soiling and curing for hay, and I determined to try it. My experiment made last year was conclusive as to the great quantity which can be made on an acre, and as to its value when cured for winter food for cows and horses. None of it was fed in the green state, as I had sufficient pasturage for my stock during the summer and fall months, and therefore I can say nothing about it for soiling from my experience; but I presume that whatever grass makes good hay will answer well for that purpose. There is no other vegetable which will yield so large and nutritive a quantity of dry fodder to the acre. It will produce from 5 to 7 tons to the acre of dry food, if the ground is rich and well prepared.(*a*) The only difficulty is in curing it if the weather should be wet when it is cut, or in cutting it too green.

The ground should be well plowed and thoroughly pulverized with the harrow, and 2½ bushels of seed sown to the acre immediately after the last plowing and harrowing, to get the start of weeds and grass. If the seeds were soaked, so as to come up very quickly, it would be advantageous. Plow in the seed with small plows or cultivators, so as to cover them shallow, and roll the ground. The proper time for sowing here, is between the 25th of April and the 5th of May. Poor land will not do for this crop. It should not be cut before the leaves begin to dry, for it is so succulent that if cut too soon, it will mould in curing. After it is cut, let it lie on the ground if the weather be dry, for several days, and if it can be turned once or twice, so much the better; then tie it in sheaves like oats, and put the sheaves in small shocks as open as possible at the bottom, that the lower part of the stalks may dry thoroughly. The dry leaves toward the top will absorb the moisture from the upper part of the stalks. When sufficiently dry, put it under cover or stack it like oats or wheat.

Persons on small farms, who raise only small quantities of Indian corn, and therefore have but little stock fodder from their corn-fields, will find that a few acres of corn sown broadcast will supply them with an ample amount of long food. Here in the west, where so much corn is raised to be converted into hogs, horses, mules, and cattle, the supply of winter fodder from the corn-fields is generally sufficient. But to the north and east, where less corn is raised, and the winters are longer and colder, there is no crop, I believe, which will supply the necessities of horses and cattle better, or with less labor. I have therefore given you my testimony in its favor; and as I am anxious that the farmers to the east, and especially in Virginia, should try it, should you publish this in your excellent paper, please to send the No. which may contain it to Mr. Botts, editor of the Southern Planter, with my request to urge it upon the farmers in that state to give it a fair trial.

. I venture to predict that as an auxiliary to the small farmers on impoverished lands, it will in many instances prevent the necessity of emigrating from their much-loved native land—a matter of so much pain always, and not unfrequently of sore disappointment. Our crops of oats, corn, and hemp, in Kentucky, are good generally, fully reaching an average. The wheat very indifferent, I should think not more than half a crop of light grain. The *rust* is the wheat destroyer of this country. How are we to avoid it? He who shall teach us will be our great benefactor, and entitled to our warmest gratitude.(*b*) If we could get some variety that would ripen before the access of warm wet weather, say the last of May or first of June, perhaps we might escape the rust. Is there any such variety?(*c*) JOHN LEWIS.

Llangollen, Ky., Sept. 4, 1844.

(*a*) We think this a low estimate, and that from 7 to 10 tons per acre, on rich and highly manured land, would be nearer the mark. Some assert that they have grown 15 tons of dried fodder or more per acre.

(*b*) We stated in our September No., page 260, that to sow wheat in drills 6 inches apart or so, had lessened its liability to rust. A top dressing of pulverized charcoal, leached or unleached ashes, or lime, is an excellent preventive. Paring and burning the soil is also highly recommended, but this is too expensive a process at present for the American farmer. When we were at the west, we found that many of the farmers erred in not sowing their wheat sufficiently early; hence its late ripening and greater liability to rust—hot, wet weather almost invariably producing it.

(*c*) An early and hardy variety of wheat is unquestionably necessary for the warm rich soils of the southwest; it ought also to have rather a *small stalk*, with as *small a leaf* as possible, so as not to retain the moisture in excess. Has our correspondent ever tried the Virginia May wheat, the Mediterranean, and other early hardy varieties? We have requested Genl. Harmon of this state, to forward him some of the Improved White Flint for experiment. We hope he will try it in various situations, and with various modes of culture; subsoiling, plowing in, harrowing, &c., &c., a separate square rod each, and give us the result. Being quite a botanist, Mr. Lewis' remarks on the vegetation (leaves, stalks, &c.) of different varieties of wheat would be eminently worthy of record. We are persuaded that wheat can be successfully cultivated in Kentucky, if proper attention be paid to it; and for an excellent article on this subject, we would refer our readers to the Essays of Judge Beatty, recently published, and noticed page 317 of this paper.

NORTHERN CALENDAR FOR OCTOBER.

October is an important month for the farmer. In this, he has to collect his roots, apples, corn, and store them up for safe keeping through the winter. Secure sugar beet and mangol-wurzel before heavy frosts occur. Very light frosts do not injure them while in the ground. They should be perfectly matured, or they otherwise will afford less nutrition. This may be known by some of their leaves turning yellow. If allowed to remain beyond this time, there is a new elaboration of their juices, and much of the saccharine principle, which is the fattening one, is destroyed. Turneps and parsneps may be left till in danger of freezing in the ground, and the latter, if not wanted for winter use, are better for remaining till spring. In this case, all the water must be carefully led away from the beds, or they will rot. Potatoes are ripe when the vines are decayed, and they should never be dug before. All roots ought to be protected from the sun after digging, by throwing over them some of the leaves or straw, and as soon as the dirt attached to them is dried, carry them at once to the cellar or pit. Too little care is used in storing roots. The air ought to be carefully kept from them, by putting them in barrels loosely covered, or in bins well guarded by straw or turf, and they are still better for having light mould or sand sifted into the interstices. Such as are stored in the fields, may be placed in pits, where the ground is dry and sandy, somewhat excavated below the surface, and piled above it to the height required. A coating of straw must first be laid over them, carefully thatched over the heap like shingles, to carry off any water that may leak through the exterior covering of earth, which may be added to the depth of a few inches, just sufficient to prevent injury from early frosts. The covering for winter need not be completed till later, as by leaving the earth loose, the escape of moisture from the roots is facilitated, as well as the gases, which are generated by the partial heating and curing of the roots, which takes place when they are thrown into heaps soon after they have been dug. When finally covered over for the winter, a hole on the top should be left, or several, if the pit be a long one, in which a wisp of straw must be placed, which will allow the escape of all moisture and gas. If the ground is a stiff clay, the roots must be placed on the surface of the ground, and a ditch dug on every side, one foot below them, so as to carry off all the water; otherwise, the lower strata will be spoiled by the water retained on the surface.

Winter apples ought to be carefully picked by hand, and placed in bins or barrels, and entirely excluded from the air. They should occupy a dry cool cellar, or upper room, in which the temperature is not below the freezing point. If they should become frozen, they must be kept covered and allow the frost to escape gradually, when the effect will be scarcely perceptible; yet when this occurs, they do not keep as long in good flavor as if untouched by frost. If you have clay land, much of the plowing for the following spring may be done in this month, throwing it into high furrows as much as possible. If there be no demand for your fall apples, they are worth much more to feed to stock, swine and cattle, than for cider; dispose of all in this way but such as are wanted for the winter use.

Secure your winter squashes and pumpkins, by placing them in a dry cool place, and you may have the luxury of good vegetable and pumpkin pies during the winter. All the garden seeds should be carefully selected and placed beyond the reach of decay and vermin. Prepare all your supernumerary stock for market; cull out your choicest animals for breed and use, and sell and fat the remainder. Be careful to avoid an overstock for winter. One half the animals well kept will yield more profit than the whole half kept. Set out trees for the ensuing spring. They may be transplanted any time after the sap has ceased to flow, which occurs when the buds are fully developed. This is the proper time to cut wood for the year. Fuel cut from July till November is more valuable than if prepared at any other season. If not convenient to draw it, let it remain on the ground till sleighing.

If hemp is wanted for early breaking, spread it out this month for dew-rotting. The lint, however, is whiter and better to defer it till December for latitudes below 40°; a higher latitude, November is the best month.

Timber cut during these months is also much more durable, notwithstanding the popular opinion to the contrary.

Kitchen Garden.—Keep the crops of spinach entirely clean; they can now be thinned out, leaving the plants four or five inches apart. Lettuces for early spring use should be treated in the same way. Those for late fall use should be transferred to frames, and protected from frost during the night. The same mode can be adopted with cabbage plants for fall and winter use. During the latter part of the month cut down the asparagus tops, and give the bed a coat of well-rotted stable manure to the depth of two or three inches. This can be done, however, as well next month.

Fruit Garden and Orchard.—Continue propagating by layers and cuttings; plant beds of strawberries that may have been omitted last month. They will be less likely to suffer from the heat of the ensuing summer, than if planted in the spring. Gather all the apples and pears which still remain upon the trees before the frost injures them. Most kinds of hardy fruit and forest trees may now be trimmed and cleared of lateral shoots and suckers. All kinds of hardy deciduous trees and shrubs can be transplanted this month as soon as they have shed their leaves. Fall planting is preferable for good-sized trees, as during the winter they can firmly establish themselves, and be ready to throw out sufficient roots in the spring to withstand the heats of summer. Small seedlings had better be left till spring, as they are liable to be thrown out of the ground by the frost in the winter.

Flower Garden and Pleasure Grounds.—About the middle or latter end of the month plant tulips, hyacinths, &c. Select a warm mellow soil and let it be highly manured with well rotted compost.

The ranunculus and anemone can now be planted, and all other varieties of bulbous and tuberous rooted flowers. Continue to transplant perennial and biennial flower roots. Plant some bulbous roots in flower pots for winter blooming. The latter part of the month, pot your tender roses and everything else that requires protection in the winter, and have them ready to move in on the sudden approach of any cold weather. Flowering and ornamental shrubs can now be found and also propagated by layers, cuttings, and suckers. The latter part of this month new pleasure grounds may be formed, and all hardy deciduous trees may be transplanted, as soon as they have shed their leaves. Live hedges can now be planted. Continue to mow your lawns, clean the gravel walks, cut and carry away all weeds, decayed flower stems, fallen leaves, &c., and prepare ground for spring planting.

SOUTHERN CALENDAR FOR OCTOBER AND NOVEMBER.

To the sugar planter, as well as the cotton grower, October and November are the most important months in the year. To the cotton grower, the work of these months will be nearly the same as that of September; as to the sugar planter, it will claim his special attention. In the early part of October, let him commence and get everything in readiness for cutting and grinding his cane. Repair the roads leading from the cane fields to the mill, if necessary; put your carts and yokes in order; procure and sharpen the knives or hooks for cutting the cane; see that the mill or rollers are properly geared, well oiled, and are clean. If your business will warrant it, procure by all means a steam engine, rather than use horses or mules in grinding. See that the kettles are well set, and that the flues are strong and cleared of filth. Put in order the coolers, and all minor implements used in the operations. Also prepare barrels or hogsheads for filtering; and look to the gutters or conductors for conveying the juices or syrups, and see that they are tight, and properly fitted to your work. Draw and split fuel for boiling if it has not been done before.

By the last of October, in ordinary seasons, more or less of the cane attains its usual maturity in Florida and Louisiana. When this period arrives, the first thing to be done is to provide for future crops. Give early attention to the saving of seed, on account of the injury which seed-cane receives by frost, and which is liable to occur before the middle of November. The general rule observed in saving cane for planting, is to reserve such a portion of the crop as is the least valuable for grinding. Hence, those fields which have produced cane from the same stubble for two, three, or four years, and which now require, from the stinted growth they produce, to be replanted with cane or some other crop, are selected to furnish seed-canes. The canes from such fields are small and short, having the joints nearer together, each of which sends up shoots called rattoons. One acre of such rattoons is sufficient, in ordinary cases, for the planting of three acres of land. They are cut near the ground, and carted to the vicinity of the fields where they are to be planted out, and then formed, when not planted as soon as cut, into long beds, about fifteen feet wide, which are called *mattresses*. These are made by commencing at one end of the bed, and placing a row of canes, with their tops on, across it—the tops directed outward. Upon this a second row is laid, so that the buts are placed about eight inches or a foot in advance of those of the first row. Upon the second row a third is placed in like manner, and so on. By this arrangement the lower part of the stalk is preserved from the cold, by the tops; except in two or three layers across that portion of the mattress last formed, where the protection is afforded by four or five inches of earth.

A great part of the planting may be done with about three feet of the rejected cane tops, to which a greater portion of the green leaves are attached at the time of gathering the crop. These, when not reserved for planting, should be left on the field for the protection of the stubbles; but when cut for planting, it is better to cut them one or two joints longer than usual, and to form them into windrows across the field. In this case, from two to four rows should be thrown into one, and arranged as respects the over-lapping, like the mattresses above described. The fields from which these tops are obtained, are often those that were planted the previous year, and in which the cane is high, and somewhat prostrated at the beginning of the grinding season. Hence it is necessary to cut this earlier to prevent it from rooting at the lower joints. When the force of the plantation will permit, the land should be planted as fast as the seed-cane is cut. Canes planted at this season should be in the driest fields, and covered to the depth of three or four inches, in order that they may take an earlier start next spring than if they remained in the mattresses during the winter. The remainder, and by far the greatest part of the planting, may be deferred until the grinding season is over, which varies from the 20th of December to the middle of January; and often it is not completed before the first of March. The covering given to the canes is more and more shallow as the season advances, until the close of February, when it rarely exceeds two inches.

In preparing the ground for planting cane, it should be first thoroughly ditched or drained, and then plowed and harrowed; after which it should be drilled, at distances varying from thirty-three inches to six feet apart, according to the newness and strength of the soil. Into these drills or furrows there should be laid, three or four inches apart, two parallel rows of cane-tops, from two and a half to four feet in length, and covered with earth at a depth corresponding to the season of the year in which the planting is done.

In the latter part of October, or early part of November, prepare for preserving sweet potatoes for the winter. Select a dry place, level the earth, and lay a bed of dry straw so as to form a circle of about six feet in diameter. On this straw pile up the potatoes until they form a cone four of five feet high, over which spread a little dry grass. Then cover the entire cone with corn-stalks set up endwise with the buts resting on the ground and the tops reaching over the apex, of a sufficient thickness to conceal all of the potatoes. Then cover the whole pile with earth at a depth of at least a foot, without leaving any air-hole at the top, as is frequently done. A small shelter should then be made so as to prevent the rains from washing off the earth. This may be done by inserting in the ground about the pile four forked stakes, on which rails may be placed to support the covering, which may consist of boards, bark, thatch, or other substances. Potatoes can be preserved in this manner until June, nearly as fresh as when first put up.

In these months dress burr artichokes, taking away all their suckers, except three to each stock, open their roots, lay about them new earth and manure, and plant out suckers for another crop. Trim and dress asparagus beds by cutting down the stocks and burning them over the beds. Then dig between the shoots, level the beds, and cover them three fingers deep with fresh earth and manure, mixed. Continue to plant celery, set it in gutters, as it grows, and hill up; sow spinach, lettuce and radish seeds, and plant out evergreens—they will do now perhaps better than in April. Plant vines or beans, and early peas.

FOREIGN AGRICULTURAL NEWS.

By the steam-ship Britannia, we are favored with our European journals to the 4th of September.

MARKETS.—*Ashes* remained without change—the transactions fair. *Cotton* had fallen from ⅛d. to ½d. on upland, and ½d. on Sea Island—sales heavy and languid. Stock on hand at Liverpool on the 1st of August, 936,000 bales. *Flour and Grain* extremely dull and declining in price—the importers will be heavy losers. *Provisions.* Beef, Pork, and Lard, had improved, and were brisk of sale—but a small quantity of either of these articles on hand, and a steady market for them was anticipated. *Naval Stores* without change. *Rice* the same. *Tobacco* languid when the packet left, though the transactions through August had been unusually large.

Money more in demand, and first class bills quoted from 2 to 2½ per cent.

American Stocks without change, and transactions unimportant.

Trade continued steady, and all branches of manufactures were in full employment.

The Weather was highly favorable for the harvest, which was going on briskly throughout the country.

Tobacco Trade.—An alteration in the excise of this article is anticipated.

Prolific Cow.—Mr. George Nicholls, of Thornton, near Pocklington, has now in his possession a cow that has produced twins three times. One of the offspring of this animal has also had twins once. Out of the eight calves six of them are heifers, and they are all exceedingly promising.

Hiveless Bees.—We find the following curious observations on hiveless bees in Capt. Widrington's Spain and the Spaniards in 1843: "Bees abound in this district, and increase to such an extent that they return an enormous profit to those who take the trouble of looking after them. The common hive is the hollow stem of the cork-tree, which is cut in lengths and is perhaps the best material in the world for the purpose; next to it is the common straw one used in England; both these substances have the same valuable quality of being non-conductors of heat and cold. They had never heard of such a thing, much less practised it, as killing bees, and were surprised when I mentioned such a custom. I ascertained a very curious fact in their economy that is well worth attending to. The Canon Cepero, so well known in the first Cortes, being shut up in the convent of the Cartuxa at Seville by order of King Fedinand, by way of passing the time, applied himself to study the economy of bees, which he had followed up at Cazalla, and was so successful in his management that in a very short time he had a thousand hives! When the civil war commenced, circumstances caused their being neglected and dispersed, and some swarms, finding no holes or cavities to suit them, attached themselves to a beam in an out-house, where they made their combs in a similar manner to that by which the tree wasps suspend their curious fabric from the branches. They were so well satisfied with this novel situation that they never left it nor swarmed, but kept adding successive combs, until they nearly reached the ground, and hung from the point of suspension like a huge living and waxen stalactite. The owner never disturbed them, but had the lower combs cut off as they were wanted, and the colony had now remained for a considerable period, without their showing the least disposition to change it. This is certainly rather important information for the managers of apiaries, and may serve to confirm the statements lately published on the practicability of inducing the insect to work downward."

Saving Flower Seed.—Instead of saving seed from any blooms that may chance to remain on, it should be saved from the best well formed early flowers. The proper way is to mark good flowers as soon as they can be found, and let their seeds ripen well before they are gathered. Let them be from good double flowers. When the seed is rubbed out, only the few outside rows of seed should be used; those which come from the centre or disk, will almost always come high. There are no means so effectual as making the best early blooms of the best varieties, and relying on those pods of seed only.—*Gardener and Practical Florist.*

Strawberry.—A very fine strawberry, measuring eight inches and three quarters in circumference, was plucked from the garden of Mr. John Saxelby, of Castle Donington, during the past week.

Benefit of Soot and Saw Dust.—About a month since three chimney sweeps sold sixty bushels of soot to a neighboring farmer for 25s., each party being very well satisfied with the bargain. Some days after, it was discovered that the gentlemen of the black robe had adulterated the soot with three sacks of very dry saw dust. The farmer, however, is convinced that his crop of turneps is greatly improved by the saw dust, as it materially contributed to the passing the manure through the drill; and the vegetation of the seed looks most propitious, and promises to prove, with bone dust, guano, gypsum, and other experiments, a valuable trial of the virtues of the chimney and saw pit.—*New Farmers' Journal.*

Peruvian Sheep.—The captain of the Leo, at present discharging a cargo of guano at the Quay, brought over with him a very fine specimen of Peruvian sheep. It is a remarkably active looking animal, and bore the rigors of the eight months' voyage with amazing hardihood, its food being chiefly bread and peas. It has four large circular horns, two projecting from the forehead and two toward the shoulders, and its feet resemble those of a goat more than our native sheep. It is a two-shear tup, with wool of a rich silky fibre, and much like what is used in the fabrication of the finer shawls. It was purchased by Mr. Shanks, butcher, Berwick, who purposes crossing him with sheep of different kinds, viz: black-faced horned, Cheviot, and Leicester sheep.—*Berwick Warder.*

Transmutation of Grain.—It is well known that we are an unbeliever in the transmutation of grain; but for the benefit of those who do not agree with us in opinion, we give the following extracts on this subject from a late London Gardener's Chronicle. We shall be pleased to record all such as have a tendency to elucidate *principles*, whatever result they may lead to, and however they may conflict with established notions. While on this subject we may be allowed to state, that we have recently been shown a stool of wheat and chess, as nearly as we can judge, originating from *one seed*, in which 5 or 6 stalks of chess were indiscriminately mixed with 25 or 30 of wheat. The account of its origin by its intelligent owner was this: Last spring he discovered in his wheat field a number of wheat plants, thrown out by the frost of an open winter, and being desirous of testing the principle of transmutation, he transplanted several of them carefully to a rich bed in the garden. Many plants produced all wheat, but some produced wheat and chess from the same plant—at least this was the honest conclusion he arrived at from the observations he made in the transplanting and subsequent growth. He thinks he can not be mistaken, as he aimed to take and thinks he did take up every plant singly which gave the double product. There is, however, the possibility of mistake in the matter, and we suspend our judgment till further light is received on this interesting subject.

"'I think it a very fit thing,' says worthy Master Gerarde, 'to adde in this place a rare observation of the TRANSMUTATION of one species into another in plants; which, though it have beene observed in ancient times, as by Theophrastus, 'De Caus. Plant.,' lib. 3, c. 16, whereas among others hee mentioned the change of Spelt into Oates, and by Virgil in these wordes—

> 'Grandia sæpe quibus mandavimus Hordea sulcis,
> Infelix Lolium, et steriles dominantur Avenæ;'

"'That is—

> 'In furrows where good Barley we did sowe
> Nothing but Darnell and poor Oates do growe;'

"'Yet none that I have read have observed that two severall graines, perfect in each respect, did grow at any time in one eare; the which I saw this yeare (1632) in an eare of White Wheat, which was found by my very good friend Mr. John Goodyer, a man second to none in his industrie and searching of plants, nor in his judgement or knowledge of them. This eare of Wheat was as large and faire as most are, and about the middle thereof grew three or four perfect Oates in all respects; which being hard to be found, I hold very worthy of setting downe, for some reasons not to be insisted on in this place.'

"What the good Gerarde's 'reasons not to be insisted on' may have been, we are unable to discover. Perhaps he was afraid of being laughed at as a dreamer; or may be, he dreaded an indictment for heresy. Then, it is to be imagined, as now, the doctrine of the transmutation of grain was laughed to scorn; and we have numbered ourselves among the scorners.

"But are the scorners right? Are we so *very* sure that one kind of grain has not been formed accidentally from another—that no room is left for argument or evidence? Some years ago we should have said yes; we now say no. We now say that we are not so *very* sure about the matter, although we do still hold hard to the orthodox faith in the matter of species. What has unsettled our belief, and changed us from skeptics into doubters, is the extraordinary but certain fact, that in orchidaceous plants forms just as different as wheat, barley, rye, and oats, have been proved, by the most rigorous evidence, to be accidental variations of one common form, brought about no one knows how, but before our eyes, and rendered permanent by equally mysterious agency. Then, says Reason, if these inconceivable changes have been proved to occur among orchidaceous plants, why should they not also occur among grain plants; for it is not likely that such vagaries will be confined to one little group in the vegetable kingdom; it is far more rational to believe them to be a part of the general system of the creation.

"And then arises the puzzling question of—Where do the grain plants come from—what country gave them birth—where are they still to be met with in their savage haunts? History says nowhere. The origin of wheat is wholly unknown; so is that of oats. Rye is said to occur wild in some of the Caucasian provinces, but that is doubtful; and the barley which was found by Col. Chesney in Mesopotamia may have been the remains of cultivation. How then can we be *sure* that wheat, rye, oats, and barley, are not all accidental offsets from some unsuspected species?

"A gentleman who lately travelled in Germany was assured, that if oats are sown early, not allowed to produce ears for the first year, but compelled by artificial means to defer their earing till the second, they will change to other sorts of grain. A seemingly more monstrous proposition never emanated from the father of paradox. Nevertheless, there could be no harm in putting the statement to the proof. The Marquess of Bristol has done so. At his lordship's request, the Rev. Lord Arthur Hervey, in the year 1843, sowed a handful of oats, treated them in the manner recommended, by continually stopping the flowering stems, and the produce in 1844 has been for the most part ears of a very slender barley, having much the appearance of rye, with a little wheat, and some oats; samples of which are, by favor of Lord Bristol, now before us. What is to be inferred from this?

"But, it will be said, has the question been fairly tried? The mode was this:—A handful of oats was taken out of a manger, sown in a garden, diligently cared for, and finally reaped. As oats do not usually consist of a mixture of barley, wheat, and oats, it could not be suspected that any error would so arise, more especially since the barley that has been raised is not exactly barley, for it is longer and thinner—nor rye, for it wants the structure of that sort of grain. Nevertheless, there is the possibility of error; and therefore the experiment will be repeated with every precaution, and we hope to be allowed to report the result.

"In the meanwhile it would be as well if a good many persons would try the experiment in different parts of the country. The question is, whether by any means wheat, oats, barley, and rye, can be made to change into each other? The Germans say that it will happen if oats are sown early, and prevented flowering till the second year. Gerarde says that he saw it happen to some extent, though he did not know how. Is this true or not?"

Disease in Potatoes.—This disease seems to be as destructive in Great Britain, Ireland, France, Germany, Holland, and Russia, as in our own country, and is attributed to many causes. The remedies suggested are—to keep such as are intended for seed deep buried in the ground all winter; thoroughly draining and subsoiling the land where planted; to pit them in small quantities; to select seed for planting not quite ripe, and such as have not the slightest appearance of being watery; liming the land; obtaining new seed, either from planting potato balls, or from some distant country where they grow in a healthy state; after digging, spread the potatoes in the sun till they become dry and unfit for food, then stow them away till required for planting; top dressing the plant with nitrate of soda, and sulphate of soda and magnesia; selecting such tubers for seed as grow near the top of the ground and are quite green; to plant the seed whole.

Show of the Yorkshire Agricultural Society.—This took place at Richmond on the 7th of August. The exhibition of stock at this large and influential Society is usually superior to that of the Royal Agricultural Society shows, unless held near Yorkshire. We perceive that Mr. Bates of Kirkleavington took the first prize of £25 ($125) for the best bull of any age with his Cleveland Lad 2d, calved March, 1838—sire Short-Tail, dam by Matchem. The prize for the best cow of any age, £20, was awarded to Mr. Crofton of Holywell, Durham,—Rosey, bred by John Colling—calved May, 1839, sire Borderer, dam by Gainford.

Show of the Highland Agricultural Society of Scotland.—This was held at Glasgow, August 14th. The exhibition was as usual numerously attended, and a greatly increased number of animals on the ground. Among other things not common at such places, we notice Alpacas, a fine display of Poultry, Butter, Cheese, and an Arab stallion of high cast.

Editor's Table.

COLMAN'S AGRICULTURAL TOUR.—We are informed that the publisher, Mr. Phelps of Boston, has been in the receipt of the manuscript for the second number of this long and eagerly expected work, and that it will be issued from the press in a few days.

SIMMOND'S COLONIAL MAGAZINE.—We are just in receipt of a few numbers of this highly valuable work, recently sent us from England by its obliging editor, and have looked over its pages with absorbing interest. It is devoted to the agriculture, manufactures, commerce, and policy of the vast colonial possessions of Great Britain, and treats its subjects with fearlessness, candor, and ability. In the Colonial Magazine we find several articles on the agriculture of the East and West Indies, Africa, and the Pacific Islands. These would be especially interesting to our sourthern planters, and we earnestly call their attention to the work. It is published in octavo form, 128 pages monthly, price 2s. 6d.—would probably cost $8 to $9 in this city.

JOURNAL OF THE AGRICULTURAL AND HORTICULTURAL SOCIETY OF WESTERN AUSTRALIA—for the year 1842. We have also received from Mr. Simmonds the above excellent Journal, for which he has our thanks. We have not yet found time to peruse it, but propose doing so shortly; for in running our eye down its contents, we notice the heads of several articles on subjects of which we have long desired to inform ourselves.

THE AMERICAN QUARTERLY JOURNAL OF AGRICULTURE AND SCIENCE.—Under this title, Dr. E. Emmons and Dr. Prime, propose issuing at Albany, on the 1st of January next, if sufficient encouragement be given to the enterprise, a quarterly periodical of 150 pages—price $3 a year, payable after the issue of the first number. They say that while the aim of their journal "will be to become the advocate and ally of American agriculture, it will at the same time embrace all foreign matters which may be interesting to farmers and scientific men. It will contain original Essays, both scientific and practical, on the various branches of husbandry—Animal and Vegetable Physiology—Chemistry—Botany—Geology—and all the branches of science connected with farming,—Notices and Reviews of Agricultural and Scientific works—Agricultural News, both foreign and domestic—details of accurately conducted Experiments and their results—and all discoveries in Science or Art which offer advantage to the farmer. The aid of some of the ablest men in this country has been secured, who will furnish its pages with valuable matter. But while it is intended to give this Journal a high character for science, it will be our steady aim to make it also highly practical and useful in the every-day business of the farmer."

Subscribers are requested to forward their names through the Postmaster of the place, to J. A. Prime, Newburg, Orange Co., N. Y., to whom all communications in relation to the subject may be addressed, post-paid, until farther notice.

We shall be pleased to take subscribers' names for the above, and give any assistance in our power to the establishment of a work of its proposed high character; for we think it much needed now in the United States—that it would be conducive of great good, and tend to the advancement of agricultural knowledge, and the interests of the country.

LECTURES ON THE APPLICATION OF CHEMISTRY AND GEOLOGY TO AGRICULTURE, by Jas. F. W. Johnstone: Part IV. Wiley & Putnam, 161 Broadway, New York—price 31¼ cents. Here we have the concluding lectures of Professor Johnstone, which are superior to anything we have yet met, for condensation of matter; felicity of illustration; simple, copious language; cautious array of facts, instead of uncertain theory and induction; and the latest and most reliable knowledge on the highly important subjects of chemistry and geology, as applied to agriculture. They have been published by Messrs. Wiley & Putnam, at a very cheap rate, in clear type, on good paper, and are stiched or bound in handsome style. No farmer now, and none who have a taste for the science of agriculture, should be without these highly instructive and entertaining volumes.

THE KITCHEN AND FRUIT GARDENER.—A select manual of kitchen gardening and culture of fruits, containing familiar directions for the most approved practice in each department; descriptions of many valuable fruits, and a calendar of work to be performed each month in the year. Lea & Blanchard, Philadelphia, 118 pages octavo—price 25 cents. This is an excellent little work, containing a great deal of instruction in a small compass, and is highly worthy the attention of the public.

ESSAYS ON PRACTICAL AGRICULTURE, including his Prize Essays carefully revised; by Adam Beatty, Vice President of the Kentucky Agricultural Society. Published by Collins & Brown, Maysville, Ky. We have here a goodly volume octavo of 293 pages by one of the best practical farmers and most gifted agricultural writers of the west. Among the subjects discussed in it are the general agriculture of Kentucky and the best system to be adopted; cultivation of corn, hemp, tobacco, &c.; rotation of crops; breeding and grazing horses, cattle, and sheep; soils and their treatment, and the food of plants; setting woodlands in grass and making and preserving timothy meadows; cultivation of wheat in rich vegetable soils; advantages of manufactures to agriculture; the cultivation of the locust, being his article published in Volume I. of the American Agriculturist entirely rewritten; and many other subjects of great interest and importance, not only to the western, but also to the eastern farmer. We have read Judge Beatty's work with a high degree of satisfaction. Every sentence shows the judicious practical man, and a safe guide in the theory and art of agriculture. The essays are written in a clear, easy style, terse, yet such as the plainest man may readily comprehend. We earnestly recommend this book to general perusal.

Canary Seed.—The Boston Cultivator says that a superior crop of canary seed may be raised by sowing it in the fall at the same time we do rye. It produces largely and brings a high price in market.

Silk in France.—The silk culture in this country is increasing with great success, and the present crop is estimated to be worth 160,000,000 of francs.—*National Intelligencer.*

Mr. Hovey in Europe.—We noticed that C. M. Hovey, Esq., editor of the Magazine of Horticulture, in Boston, sailed for Europe in the steam-packet of the 1st of August last. We wish him a pleasant trip abroad, and have no doubt that he will obtain such information while absent, as will be of essential service to him in his business and the future conduct of his excellent journal.

Poison in Rhubarb Leaves.—A family in Bedford, Ct., were lately poisoned by eating rhubarb leaves as greens. The stalk of this plant is used for tarts and sauce without danger, but the leaves contain oxalic acid.—*Boston Cultivator.*

Maple Sugar.—The New York Sun states that 10,000 hogsheads of maple sugar are sold annually in this city.

Swan for Sale.—Who has any, and what is the price ?

Lard Oil.—The firm of R. W. Lee & Co., manufactures eighty kegs of lard oil every twenty-four hours. The product in winter is one third elaine and two thirds stearine; in summer the proportion is exactly the reverse. The oil thus manufactured is equal to two hundred gallons per day. The value of the oil and stearine shipped from this single establishment during the last sixteen months, is over $100,000.

In the pork season the oil is made directly from the hog, the whole of which is used for the purpose, except the hams and shoulders.

Sperm oil, prior to the manufacture of lard oil, was sold at from $1,25 to $1,50, according to quality. The corresponding qualities of lard oil are now 50 to 62½ cents. But this comparison does not fully exhibit the difference in saving to the community; for it is a demonstrable fact, that lard oil goes farther as a means of light, and the difference must be great in other uses.

There is the same difference, and from the same cause, between summer and winter *lard* oils as in summer and winter *sperm* oils. The article made in summer holds more or less stearine in solution, which the access of cold weather readily detects, and renders necessary that the winter supply should be made as that season approaches.

Messrs Lee & Co. forward the article to every section of our country, and even beyond the Atlantic. In New York and still farther east, it sells side by side with its great rival, sperm, and is steadily winning its way into public favor. As to the western market, it is rapidly driving out of use all other oils, either for light or machinery.

Lard oil is made in Cincinnati in twenty-two establishments, which manufacture an aggregate of 600,000 gallons per annum, value at 50 cts., nearly one third of a million of dollars. The value of the stearine and other residuum, must be at least as much more, these articles having steadily advanced in price since the introduction of the lard oil manufacture.

We copy the above from the Cincinnati Advertiser, which cautions the public upon the matter of *all sorts of grease* sold as lard oil, greatly to the prejudice of the pure, well-manufactured article. We hope that people here will also take heed to the caution; for nothing is more common, even in this market, than *vile grease* hawked about as "pure, genuine, unadulterated lard oil of the first quality."

Potato Rot.—In the Utica Daily Gazette, Geo. R. Perkins, Esq., makes the following valuable observations on this alarming disease: "For several days past I have been making a few observations, in order, if possible, to determine the cause of this disease. I find the vines of those potatoes which are rotten, to be hollow for four or five inches above the surface of the ground; they bear the appearance of having been eaten out by an insect, and in many cases I discovered a small green colored maggot in the cavity. On scraping off the outer bark from the vine I discovered that the leaflet buds had the appearance of having been eaten out, leaving holes through which I conjectured the insect had passed. Those vines attached to a sound and ripe potato were solid and partially green. Is it not possible, and highly probable, that all this evil may thus be caused by an insect?

Farm Architecture.—We shall be obliged to our jocose cotemporary of the Maine Farmer, if he will send us the "jack-knife" cut of his *Quoddy wigwam*, and he may be assured that we shall reciprocate the favor in an *Omahaw lodge*, "corn-stalks and all," the moment we obtain possession thereof. If he can add a charming aboriginal to adorn the wigwam, and to cook the Quoddy blue potatoes which we have continued to raise in large quantities from the seed he sent us some years ago, we shall esteem his gift then as beyond price. Let the said person be as light complexioned and rosy as convenient, with as many good points, moral, intellectual, and physical, as can be found.

Green Corn Pudding.—The Louisville Journal says that the following recipe will produce one of the rarest delicacies ever brought to the table: Take of green corn twelve ears, and grate it. To this add a quart of sweet milk, a quarter of a pound of fresh butter, four eggs, well beaten, pepper and salt, as much as sufficient; stir all well together, and bake four hours in a buttered dish. Some add to the other ingredients a quarter of a pound of sugar, and eat the pudding with sauce. It is good cold or warm, with meat or sauce; but epicures of the most exquisite taste declare for it, we believe, hot, and with the first service.

Cheap Manure.—By mixing at the rate of one cask of unslaked lime to a cart load of straw, potato tops, and corn stalks, and heaping them all together, Mr. Barton converted the above materials into good manure in 14 days.—*Maine Farmer.*

The Cockle Burr Poisonous to Hogs.—The Southwestern Farmer says that whenever hogs are turned into a pasture where cockle burr grows, they invariably die.

Twenty-seven Crops of Rye in Succession.—We find in the Boston Cultivator, that Mr. Mark Cooper, near the village of Enterprise, Lancaster co., Pa., had a very fine crop of rye the past season, being the twenty-seventh in succession on the same field, and what is most extraordinary, the land has not received a spadeful of manure for 27 years. We are confident it must have had something else then, to give food for the rye. There are instances where lands have grown a continuation of grain crops without apparent diminution, for years; but these were the rich bottom lands of rivers or lakes, where food had been accumulating for the crops for centuries, and could not consequently be soon exhausted.

The Prune.—This tropical fruit has been successfully cultivated in Tuscaloosa, Alabama.—*South. Cult.*

AGRICULTURAL SOCIETY SHOWS FOR OCTOBER.—

Cayuga	county,	at	Auburn,	October	9 and	10
Tompkins	"	"	Ithica,	"	4,	5
Green	"	"	Cairo,	"	16,	17
Lewis	"	"	W. Martinsburg,		12,	13
Otsego	"	"	Cooperstown,		2,	3
Madison	"	"	Cazenovia,	"	1,	2
Wayne	"	"	Lyons,	"	2,	3
Cortland	"	"	Homer,	"	2,	3
Chemung	"	"	Havana,	"	2,	3
Orange	"	"	Goshen,	"	23,	—
Montgomery	"	"	Fonda,	"	11,	12
Monroe	"	"	Rochester,	"	8,	9
Wayne	"	"	Lyons,	"	28,	—
Niagara	"	"	Lockport,	"	9,	10
Pennsylv. State Show			Philadelphia,	"	16,	17
Mass'etts	"	"	Worcester,	"	9,	10
"	Hampden,		Springfield,	"	16,	17

TO CORRESPONDENTS.—H. T. of Ohio, with a package, is received. The contents will appear from month to month, and all inquiries answered in due time. The suggestions will be carried out in our next volume. The plans of farm buildings by L. F. A. are in the hands of the engraver, and will appear in the January No. for 1845, if not previously. We are promised the prize ones for our two next. With so many things as are continually charged upon our memory, we had entirely forgotten the latter. We are in receipt of several other communications which we have not room to notice.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, SEPTEMBER 23, 1844.

ASHES, Pots,	per 100 lbs.	$4 18	to	$4 25
Pearls,	do.	4 44	"	4 50
BACON SIDES, Smoked,	per lb.	3½	"	4½
In pickle	do.	3	"	4
BALE ROPE	do.	6	"	9
BARK, Quercitron	per ton	24 00	"	25 00
BARLEY	per bush.	56	"	57
BEANS, White	do.	1 25	"	1 75
BEEF, Mess	per bbl.	5 00	"	7 00
Prime	do.	3 00	"	5 00
Smoked	per lb.	5	"	7
Rounds, in pickle	do.	3	"	5
BEESWAX, Am. Yellow	do.	28	"	31
BOLT ROPE	do.	12	"	13
BRISTLES, American	do.	25	"	65
BUTTER, Table	do.	15	"	18
Shipping	do.	8	"	12
CANDLES, Mould, Tallow	do.	9	"	12
Sperm	do.	28	"	38
Stearic	do.	20	"	25
CHEESE	do.	3	"	7
CIDER BRANDY, Eastern	per gal.	35	"	40
Western	do.	30	"	35
CLOVER SEED	per lb.	7	"	8
COAL, Anthracite	2000 lbs.	4 75	"	5 75
Sidney and Pictou	per chal.	6 25	"	6 75
CORDAGE, American	per lb.	11	"	12
CORN, Northern	per bush.	50	"	51
Southern	do.	46	"	48
COTTON	per lb.	5	"	9½
COTTON BAGGING, Amer. hemp	per yard.	16	"	18
American Flax	do.	16	"	17
FEATHERS	per lb.	30	"	35
FLAX, American	do.	8	"	8½
FLAX SEED, rough	per 7 bush.	9 00	"	9 75
clean	do.	10 00	"	10 50
FLOUR, Northern and Western	per bbl.	4 12	"	4 50
Fancy	do.	4 75	"	5 25
Southern	per bbl.	4 12	"	4 50
Richmond City Mills	do.	5 50	"	5 75
Rye	do.	3 12	"	3 38
HAMS, Smoked	per lb.	5	"	10
Pickled	do.	4	"	7
HAY	per 100 lbs.	30	"	35
HIDES, Dry Southern	per lb.	9	"	11
HEMP, Russia, clean	per ton.	175 00	"	180 00
American, water-rotted	do.	140 00	"	180 00
do dew-rotted	do.	90 00	"	140 00
[illegible]S	per lb.	10	"	12
HORNS	per 100	1 25	"	5 00
LARD	per lb.	5½	"	6½
LEAD	do.	3½	"	4
Sheet and bar	do.	4	"	4½
MEAL, Corn	per bbl.	2 44	"	2 62
Corn	per hhd.	11 75	"	12 00
MOLASSES, New Orleans	per gal.	28	"	31
MUSTARD, American	per lb.	16	"	31
OATS, Northern	per bush.	29	"	31
Southern	do.	25	"	27
IL, Linseed, American	per gal.	73	"	75
Castor	do.	80	"	85
Lard	do.	55	"	65
OIL CAKE	per 100 lbs.	1 00	"	— —
PEAS, Field.	per bush.	1 25	"	— —
PITCH	per bbl.	1 00	"	1 12
PLASTER OF PARIS	per ton.	2 25	"	2 50
Ground, in bbls. of 350 lbs	per cwt.	1 12	"	— —
PORK, Mess	per bbl.	8 25	"	10 00
Prime	do.	6 50	"	8 12
RICE	per 100 lbs.	3 12	"	3 56
ROSIN	per bbl.	58	"	75
RYE	per bush.	67	"	68
SALT	per sack	1 25	"	1 38
SHOULDERS, Smoked	per lb.	4	"	6
Pickled	do.	3	"	4
SPIRITS TURPENTINE, Southern	per gal.	35	"	38
SUGAR, New Orleans	per lb.	5	"	8
SUMAC, American	per ton	25 00	"	27 50
TALLOW	per lb.	6	"	7½
TAR	per bbl.	1 75	"	1 87
TIMOTHY SEED	per 7 bush.	11 00	"	13 00
TOBACCO	per lb.	2½	"	6½
TURPENTINE	per bbl.	2 25	"	2 75
WHEAT, Western	per bush.	88	"	92
Southern	do.	83	"	87
WHISKEY, American	per gal.	23	"	25
WOOL, Saxony	per lb.	45	"	65
Merino	do.	40	"	50
Half-blood	do.	35	"	40
Common	do.	25	"	30

New York Cattle Market—Sept. 23.

At market, 1500 Beef Cattle (300 from the south), 30 Cows and Calves, and 3500 Sheep and Lambs.

PRICES.—*Beef Cattle*—Owing to the increased supplies, are a little cheaper, and we alter our quotations to $4 *a* 4.25 for ordinary, and $4.75 *a* 5.50 for prime and extra—left over 150 head.

Cows and Calves.—All sold at $14 *a* 24.

Sheep and Lambs.—The market was cleared at $1.25 *a* 4.50 for Sheep, and 87½ *a* 2.75 for Lambs.

Hay.—A good supply at 50 *a* 62 cents per cwt. for loose by the load.

—

REMARKS.—*Ashes* are steady with an increased demand. *Cotton*, since the arrival of the Britannia, has declined ½ of a cent. per lb. and an ordinary business is now doing in it. Export from the United States since 1st September, 18,924 bales; same time last year, 2,888; same time year before, 5,065. *Flour* brisk and prices well sustained. *Rye Flour* is scarce. *Wheat* quite in demand and very little in market. Other kinds of grain in fair request and supply. *Hay* dull. *Hemp*, there is an increased inquiry. *Molasses* dull. *Naval Stores* plenty. *Provisions*—Pork is more sought after—Beef excessively dull—Lard brisk with an upward tendency. *Rice* flat. *Seeds* little in request. *Sugar* firmer. *Tallow*, transactions brisk. *Tobacco* the same. *Wool* has slightly fallen and not so much inquiry.

Money is from 4 to 6 per cent. according to the paper offered—the banks generally discount at 5 to 6. About $2,000,000 of specie were exported during August and September.

Stocks—Nothing particularly worthy of remark.

Business generally continues good.

The Weather was excessively hot and dry the past month up to the 24th, when a pouring rain set in, and we shall now probably have an excess of wet. Many things have suffered from the severe drought. The grass on the lighter soils has been parched up; the later varieties of corn have not filled quite as well as anticipated: and the cotton has opened too fast, and in many instances stopped growing or shed its bolls—the worm also has made some havoc, so that many a promising field of August will not yield over two thirds of a crop. The picking commenced unusually early. The sugar crop is very fine, and it is anticipated that it will turn out 40,000 hogsheads more than has ever been made in the southern States. Complaint is made of tobacco being a little short in some sections, but all agree that the quality is very superior. Everything has ripened much sooner than is common. Fruit is extremely abundant. Upon the whole, the crops are large, have been well got in, and we know of no material failure, except the rot in potatoes, which is again proving very disastrous. As yet we have not had the slightest appearance of frost.

ICHABOE GUANO.

The subscribers have received by a late arrival from Liverpool, a few hundred weight of this superior guano, pure as imported from Africa, being taken direct out of the ship Clydesdale, arrived at Liverpool docks. A writer in the London Gardener's Gazette, June 8, 1844, remarks: "The competition for this guano in the colonial market was so great, that two cargoes were sold in about twenty minutes. The desire for Ichaboe guano has arisen from the fact that all the eminent chemists who have analyzed it, found it to possess the fertilizing properties in the highest degree: and the result of its application by practical agriculturists has proved the correctness of their analysis. This island (Ichaboe) on the western coast of Africa, which three years since was unknown, is about a mile and a half in circumference, and is deeply covered with guano, the deposite of sea-birds that have for ages remained undisturbed in their possession."

Price $6 per hundred pounds, or $1 for 16 pounds, (which is sufficient for 40 gallons of water,) put up in neat boxes; also 7 lb. boxes for 50 cents. It should be applied in a liquid state, and immediately after a rain. A liberal watering with this liquid once a fortnight is sufficient for vegetables, Indian corn, potatoes and turneps, and once a week for flowers in pots, and dahlias, tuberoses, and chrysanthemums.

Also, the best of Artificial Guano, made from an exact analysis of the real, in boxes of 20 lbs., at $1 per box, or 10 lbs. for 50 cts.

3t. J. M. THORBURN & CO., 15 John st.

LINNÆAN BOTANIC GARDEN AND NURSERY—Late PRINCE'S.

FLUSHING, L. I., NEAR NEW YORK.

The new Descriptive and unrivalled Catalogue, not only of FRUIT, but also of ORNAMENTAL TREES, SHRUBS, and PLANTS, cultivated and for sale, *at reduced prices*, at this ancient and celebrated Nursery, (*the* IDENTICAL *premises known as* PRINCE'S, *and by the above title for nearly fifty years*,)

☞ With directions for their Culture,

may be had *gratis* on application by mail, *post paid*, to the NEW PROPRIETORS, who will endeavor to merit the CONFIDENCE and PATRONAGE of the Public, by INTEGRITY and LIBERALITY in dealing, and MODERATION in charges.

WINTER & Co., Proprietors.

Flushing, Aug. 31, 1844.

AGRICULTURAL WORKS,

For sale by SAXTON & MILES, 205 Broadway, New York.

Clater and Youatt's Cattle Doctor, containing the causes, symptoms, and treatment of all the diseases incident to Oxen, Sheep, and Swine. Price 50 cents.

Dumas & Boussingault's Chemical and Physiological Balance of Nature. Price 50 cents.

The American Race Turf Register, Sportsman's Herald, and General Stud Book. By P. N. Edgar. Price $2.

Liebig's Agricultural and Animal Chemistry. Price 50 cts.

Liebig's Familiar Letters on Chemistry. Price 12½ cts.

Loudon's Encyclopædia of Agriculture, English. Price $10.

Loudon's Encyclopædia of Gardening. Price $10.

Bridgeman's Young Gardener's Assistant, new edition, much enlarged. Price $2.

The Farmer's Mine; being the most complete work on Manures ever published. Price 75 cts.

The Vegetable Kingdom, or Hand-Book of Plants. Price $1.

Youatt on the Horse; a new edition. Price $2.

The Complete Farmer, and Rural Economist, by Uhomas G. Fessenden. Price 75 cts.

The New American Orchardist, by Wm. Kenrick. Price 87½ cts.

The Honey Bee, its Natural History, &c., with 35 engravings. Price 31 cts.

Bees, Pigeons, Rabbits, and the Canary Bird, familiarly described. Price 50 cts.

The American Poultry Book; being a practical treatise on the management of Domestic Poultry. Price 35 cts.

A Treatise on Sheep, with the best means for their general management, improvement, &c.; by A. Blacklock. Price 50 cts.

The Theory of Horticulture; or an attempt to explain the principal operations of Gardening upon physiological principles; by John Lindley. Price $1,25.

Gardening for Ladies, and Companion to the Flower Garden, by Mrs. Loudon. Price $1,50.

The Farmer's Instructor; consisting of Essays, practical directions, and hints for the management of the Farm and the Garden. By J. Buel, 2 vols. Price $1.

A Muck Manual for Farmers; by Samuel L. Dana. Price 50 cts.

Chemistry Applied to Agriculture; by M. Le Comte Chaptal. Price 50 cts.

The AmericanGardener; by William Cobbett. Price 75 cts.

A Ureatise on the Vine: embracing its History, and a complete dissertation on the culture and management of Vine Yards; by Wm. R. Prince. Price $1,50

The Farmer's Encyclopædia, and Dictionary of Rural Affairs; by Cuthbert W. Johnson. Adapted to the United States by Gouverneur Emerson. Price $4.

IMPROVED WHITE FLINT WHEAT.

The subscriber has just received a lot of this very superior Seed Wheat, direct from the grower, R. Harmon, jr. Price $6 per bbl. of a little over three bushels.

A. B. ALLEN,
205 Broadway.

NORMAN HORSES FOR SALE.

The undersigned having relinquished farming, offers for sale his entire stock of Norman horses, twelve in number—imported and their progeny. As he proposes to exhibit his stallion Diligence, and two of his colts, broken to harness, at the Show of the American Institute in the city of New York, on Wednesday, the 16th of October next, and offer them for sale on Friday, the 18th, he deems it unnecessary to enter into particulars, as he will be present to answer inquiries. He will merely refer to pages 172 and 193 of the Cultivator for 1842; the American Agriculturist, page 209, for 1844; the N. Y. Central Farmer for March, 1844; and the Farmer's Cabinet of Philadelphia, Vol. VI., No. 9, for information in regard to his importations of these horses, their uses, &c. The balance of the stock, consisting of 1 stallion and 2 mares imported, and 3 stud-colts and 3 mare-colts, their progeny, will be held at private sale at Moorestown, Burlington county, New Jersey, 9 miles from Philadelphia. by

1t. pd EDWARD HARRIS.

AYRSHIRE CATTLE FOR SALE.

For sale an imported Ayrshire bull, 4 years old, selected by one of the most competent judges in Scotland, from one of the best herds. His superior is not in this country—price $200. Also a bull calf 17 months old, got by the above bull, and from an imported Ayrshire cow—price $100. A bull calf 2 months old, of similar character—price $50.

Apply to the editor of this paper.

IMPORTED AYRSHIRE CATTLE.

The subscriber offers for sale the imported Ayrshire *Bull and Cow* exhibited by him at the late State Show, both of which received a premium. Also, a yearling bull, and a bull calf 7 weeks old, out of the above.

Also, a very superior Durham bull calf, 6 months old.

JOEL RATHBONE.
Albany, Sept. 26, 1844. 3t

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 miles, without the State.

ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

GREAT SALE OF ELECTORAL SAXON SHEEP.

The undersigned will sell at vendue, the two flocks of *pure Electoral Saxon Sheep*, belonging to the estate of the late Henry D. Grove, as follows: 1st. That at Granger, Medina county, Ohio, consisting of about 400 sheep, on the 30th Sept., next, on the farm now occupied by them. 2d. The home flock, at his late residence in Hoosick, Rensselaer county, N. Y., consisting of about 350 sheep, on the 15th Oct., next. A rare opportunity is offered to those who may be anxious to improve the quality of their flocks. The following is the opinion of the distinguished manufacturer who has usually purchased Mr. Grove's wool, of the character of these flocks:—

"The purest blood in this country was introduced by the late Mr. Grove in his own flocks, the wool of which I have been familiar with since their importation in 1827. In point of fineness and admirable *felting* qnalties, this wool is unsurpassed by any flock in this country, and the fleeces average about half a pound each more than any other I am acquainted with."

SAMUEL LAWRENCE.

Lowell, April 9, 1844.

The terms of the sales will be cash. Reference, Samuel Lawrence, Lowell, Mass., or the subscribers.

ELIZA W. GROVE,
W. JOSLIN,
S. A. COOK. } Administrators.

Buskirk's Bridge, N. Y., April 20, 1844.

BERKSHIRE PIGS FOR SALE.

Having made use of his present stock for several years, and wishing to take a fresh cross, the subscriber will dispose of three of his splendid Berkshire breeding sows, at the very low prices of $25 t $30 each. These animals are of good size, fine form, and descended from the best blood imported into the United States. Also, tw superb Woburns at the same price.

Berkshire and Woburn pigs, 3 months old, caged and delivered on ship-board at the city of New York, for sale at $25 per pair

Address CHARLES STARR, Jr.
Mendham, Morris Co., N. J.

AGENTS FOR THE AMERICAN AGRICULTURIST.

Israel E. James is our agent for the Southern and South Western States and Florida, assisted by James K. Whipple, Wm. H Weld, O. H. P. Stem, John B. Weld, B. B. Hussey, and Allen E Brooks.

CONTENTS OF OCTOBER NUMBER.

Page.
Saving Seeds,
Making Vinegar, } - - - - - - - - 289
Incubation, - - - - - - - - - - - 290
Honey Dew, - - - - - - - - - - - 291
Lift and Forcing Pumps,
Marl,
Buckwheat,
The Coming Winter } - - - - - - - - 292
Fourth Annual Show of the N. Y. State Ag. Society, - 293
Death of Grandee, - - - - - - - - - - 299
Keeping Deer in Parks,
Pedigrees of Pedro and Fortune, } - - - - - - 300
Agricultural Publications, W. D., - - - - - - 301
Guinea Goose, Bement's Poult. Companion,
Young Orchards, Putnam,
Mechanics in Massachusetts, A Traveller, } - - 304
Odd Rows of Corn, T.,
Southern Agricultural Implements, T. Affleck, } - - 305
Clay Lands for Grass, L. F. Allen, - - - - - - 307
Advice—Finding Fault, Octogenarian, - - - - - 308
Botts' Straw Cutter, C. T. Botts, - - - - - - 309
Fruit Garden of Dr. Rhinelander, S. B. Parsons, - - 310
Tour from Alabama to Tennessee, Alexander McDonald, - 311
Corn for Soiling and Fodder, John Lewis, - - - - 312
Northern Calendar for October, - - - - - - - 313
Southern do " do and November - - - - 314
Foreign Agricultural News, Hiving Bees,
Transmutation of Grain, Rot in Potatoes, &c., } - - 315
Editor's Table, Agricultural Shows for October,
Lard Oil, To Correspondents, &c., } - 317
Review of the Market, - - - - - - - - - 319

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. III. NEW YORK, NOVEMBER, 1844. NO. XI.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway

ARABIAN AND PERSIAN HORSES.

We wish to inquire of any of our readers, whether the imported Bussorah, a small, but very beautiful sorrel horse brought to this country from the head of the Persian Gulf, in 1819, being then 5 years old, is still living? if so, *where* does he *now* stand? If not living, *where* and *when* did he die? and in what places has he stood since he left the vicinity of New York several years ago? Also, where are some of the best bred of his get now to be found? for instance, the horses Selah, Sir Harry, Ranger, and Hanover; and more especially the mares Lady Mary, and Josephine, or either of them? Also, where are the two Arabian horses imported a few years since by Commodore Elliott, especially the *grey* one? Where have they been standing since their importation into the United States? and how have their stock proved as racers, roadsters in harness, and under the saddle? We make these inquiries, having understood that very few if any of Bussorah's colts proved successful racers, though we know that some of them made very superior animals on the road, and sold at high prices, being much better liked than those usually got by the English and American thoroughbreds. We would like also to be informed what has become of the two Arabian horses which arrived a short time since at Salem, Mass., sent by the Sultan of Muscat to the President of the United States, and when and where they are to be sold.

BLIGHT IN PEAR-TREES.

A friend has just mentioned to us a remedy for this formidable disease in pear-trees, which he has found effectual. On discovering the blight which had become very general on his trees, he immediately cut off the branches it most effected, then scraped the bark from the trunk and limbs thoroughly, to the live bark, and applied a strong ley from wood ashes. Although the bark bled profusely in many places, and was turned to a dark brown on applying the ley, the trees immediately put out deep, green leaves, and have since been entirely recovered. The common ship-scraper was made use of in scraping the trees.

The result of the above treatment would seem to indicate, as has been latterly asserted, that blight is owing to a minute insect concealed within the bark. We should be highly gratified by the reception of any communications on this subject, proving more fully, if possible, whether we are correct in our supposition.

SKETCHES OF THE WEST—No. VI.

Plantation of Mr. Adam Beatty.—Stopping two miles or so short of Washington, we diverged to Prospect Hill, the plantation of Judge Beatty, who has so much distinguished himself in Kentucky as a writer on agriculture and as a practical farmer. Though at an elevation of nearly 300 feet above the Ohio river, the land, in common with other large tracts at this elevation, is extremely fertile, frequently as much so as that lower down on the plains. We found the plantation in admirable order. It embraces about 400 acres, covering two hills, with a pretty valley between, through which meanders a clear rivulet, sparkling over a white limestone bottom. Plenty of excellent fencing stone abounded in the valley, and Judge Beatty had commenced the use of it for his enclosures. Wherever stone can be had in Kentucky, we found that it was rapidly taking the place of wood for fences, it is found so much more durable; and it is assuredly to be preferred on account of its greater strength and beauty, for nothing can be more unsightly than the crooked snaky fences so common the United States over.

Crops.—The main crop on this plantation is hemp, and for the better production of it, and also to maintain the fertility of the soil, Judge B. has an established system of rotation, the particulars of which, as it has lately undergone some modification, we hope to publish hereafter from his own pen. Large quantities of corn are raised here, together with some wheat and the other small grains. With the exception of potatoes, roots are not much thought of, so destructive is the fly and numerous other insects in the first stages of their growth.

Stock.—As Judge Beatty did not wish to embark in the business of breeding fine animals for sale, he has availed himself of the best grades within his reach, which answer all purposes of general utility. Large, stout horses and mules are mostly used for the farm work; the cows for milk, and the cattle for fattening, are principally a high cross of the Durham; the swine a greater or less intermixture of Irish Grazier or Berkshire; and the sheep of pure or mixed Merino blood. We noticed a fine large stock of all these different animals, particularly the last, which upon the whole we believe were considered the most profitable stock kept upon the farm. Judge B. esteems sheep highly in another respect; and that is, for feeding off his grass and clover, and leaving the land in a better and richer condition than other stock can do for the succeeding crops. We regret to say, that this part of sheep husbandry is little thought of, not only in Kentucky, but even at the north, where our lands east of the mountains, owing to their general thinness of soil, require more skill and attention in keeping up and increasing their fertility, than those at the west.

We found many things in practice at Prospect Hill worthy of notice; but inasmuch as the best of these were embodied in a general way, in two articles upon Kentucky Farming in the first volume of this work, it is unnecessary to repeat them. Suffice it to say, that in cultivating his plantation, Judge B. adopts all such improvements as a long course of scientific agricultural reading, and the observation of the best practice in the United States have proved advisable for his particular section of the country. In the neatness of his farming operations, order, general good management, and average products from year to year per acre, we know of no place of anything like its size, which is superior to the plantation at Prospect Hill—and there are things here which must be seen rather than described, to be properly appreciated.

Hemp Factory.—On leaving Prospect Hill, Judge B. had the kindness to give us a drive in his carriage to Maysville, distant about seven miles. Here we found a large hemp factory, erected at a cost of $80,000, and capable of making a million yards of cotton-bagging per annum, beside large quantities of bale rope.

We now left Kentucky on an excursion to Ohio and as far south as New Orleans, and subsequently revisited a small part of it the following June. We were not only gratified by what we saw of this noble state, but received much valuable instruction on agriculture and the rearing of stock during our short journeying there. It is our intention to see more of this superior section of the country, together with other parts of the west and south, at the earliest opportunity which may offer to accomplish so desirable an object.

OBSERVATIONS TO PLANTERS.

The following admirable hints we find addressed to the planters of South Carolina, by a correspondent of the Southern Agriculturist. We wish that they might reach and be heeded by all; for it is certain that the stock of cotton on hand in Europe is fearfully accumulating, and that so long as this process is going on it must continue to fall. There is no escaping this dilemma, and the sooner our southern brethren look this matter in the face and provide for it by a change of system, the better it will be for them. We hope they will take these observations kindly, for they are kindly meant.

"There is a partial if not complete remedy for this evil, which I take the liberty of suggesting through your pages. Let every cotton planter make it a rule and adhere strictly to it, to make no more cotton than he can make clear of his plantation expenses. That is, let him pay all his plantation expenses by other crops, and make only so much cotton as will support his family, pay his debts, and add to his property. Many planters I dare say will answer, that they would be glad to make enough cotton to pay their debts and support their families. This may be true as to some, but in general it would be more pert than true. Even these who are hardest run, purchase corn, salt, negro cloths, &c., with *cotton* money. I doubt if there is any planter who could not produce enough for market, beside cotton, to pay for all these things, and all plantation expenses. Some are so situated, that they could sell corn alone sufficient for the purpose. Let them increase their corn crop then to that amount and diminish cotton. Others again if the corn could not be sold, might feed it to stock and sell that. It will bear transportation, and there is a great deal of foreign beef and bacon sold in the cotton region. Wheat and flour in the middle and upper country, could be made to pay these contingencies. Rice will grow at the foot of the mountains and command a good price, and so will tobacco. Many could pay these expenses by cutting timber and making shingles, staves, &c. In short, there are few planters in the whole cotton region, who might not by a little diversion of labor, manage to make what cotton they do, clear of the expense of production, and do so profitably. Let each planter look around him, and see what his resources are. I do not invite him to make his own shoes, hats, blankets, clothes, salt, and iron. In most cases, others who are in these lines can make these things and bring them to his door cheaper than he can make them himself. But he can follow the business he understands, or at least is best prepared to carry on, and make something else besides cotton to pay for them.

"I know the folly of recommending any measure to planters, requiring their combined action. I recommend this to each planter for his own *individual advantage*, as well as for the sake of the whole. While it will diminish the aggregate crop, if it curtails but a bale, it will teach each man to be independent, to a certain extent, of cotton speculators, open his eyes to his own resources, and gradually prepare the way for that change of culture which is inevitable, and at hand, for all those who can not make a heavy bale to the acre. And I would add, that every planter should as speedily as possible reduce his culture to such land only as will make a heavy bale per acre. If he has no such, let him *make* it—manure will soon do it. Cut down the cotton, increase the corn and pea crop, pen hogs, cattle, and everything else on straw, muck, weeds, &c., &c., and he will soon have as much land that will raise him a bale to the acre as he wants, if he makes no more cotton than he makes *clear*.

"I preach no more than I practice. I am a middle-aged planter, and I have nearly always made my cotton crop clear. I have suffered my share in the hard times, and have met, I think, more than my average of losses; yet I have kept above board without any stringent economy, mainly because I have paid plantation expenses by selling corn, peas, oats, &c. My expenses have been as heavy as any planter's of the same force, and my land probably as poor; yet I have kept up chiefly I think, because I did not have to pay them in a lump at the end of the year out of my cotton, which would have left me so small a surplus, that probably I should not have thought it worth taking care of. The balance would have been mere odds and ends, which few know how to make tell. I have made corn, &c., supply my odds and ends of cash, and appropriated them as they came to hand to pay current expenses; and when my cotton came in, I could do something with my little *lump* of *clear money*. Let me say also, that after next year I shall not plant an acre but will (or at least *ought* to) yield me 400 lbs. clean cotton. Not *one*—and not many I trust next year. Yet my land in its best natural condition, will not average half that much. What I adopt for my own good, and experience has proved to me is for the good of every planter, both individually and collectively, I recommend others to *try*."

AMERICAN PLOWS IN ENGLAND.

We wonder that our cotemporaries should so worry themselves about the reported failure of the working of American plows in England. Have not the English plows always equally failed in their working in the United States, with an American plowman at the end of the handles? The truth is, that the plows of the two nations are of so entire different a construction, that an Englishman with his prejudices, and without any previous practice, is totally unfit to handle an American plow; and so is an American, an English plow. Had a thoroughbred Yankee been at the handles of the American implement, at the late trial before the Royal Agricultural Society, at Southampton, the result would unquestionably have been in its favor; for we know from repeated personal observation, made in both countries, that the American plow will do more work with less draught than any English plow whatever; and that it is upon the whole better fitted to our purposes of plowing round stumps and rocks, or on uneven ground, and among stone and gravel, than anything from abroad. But in level, smooth land, we think it has some defects; the principal of which are a want of proper lever purchase in the handle, and a miserably contrived clevis.

When plow-handles are placed in so upright a position as is usual with us, the plowman has not a proper control over his implement, and it makes it hard work for him to handle it in the furrow; besides, it is continually bobbing up and down; running alternately deep and shallow; and in and out, instead of moving easily, steadily, and smoothly along. This defect has been pretty well remedied by Ruggles, Nourse, and Mason, and some others; they having adopted nearly the happy medium between, we think, the extreme length of the Scotch plow-handles, and the short ones of America, and added a wheel upon the beam to gauge the depth of plowing, and make the draught easier. The second defect, the clevis, we suppose has been thus long submitted to because more simple and cheaper made—we ought to say infinitely *dearer* in the end. To our mind, the Scotch clevis is the most perfect of any we have yet seen. It looks bungling, and seems to abound in *useless machinery;* but let any one use it on his plow a single season, and pay any attention to its working, and he will after that never have any other, we will be bound to say. As to the make of plows, they must be of different sizes and forms to suit different purposes; and this idea of offering a single premium for the *best* plow, is perfectly ridiculous; it is like trying a race-horse, a roadster, and a cart-horse, together; or pitting a Merino, a Leicester, or a South Down sheep against one another. Each are valuable for particular purposes, and we know from considerable practice, and much personal observation, that different soils—for instance, from heavy clay through the several gradations to shifting sand, and the different state again of these soils—whether in green sward or naked fallow, or to turn in a stubble and green crop, at least six kinds of plows are requisite to perform their work properly. With these observations now before them, our readers will infer that we are not only heartily tired of hearing which is the *best* plow, but of witnessing and recording the results of plowing matches as at present conducted. They prove just *nothing at all* of the slightest benefit to the community, and are time and money thrown away. When shall we have a reform?

CHEMICAL SOLUTIONS FOR SEEDS.

We have repeatedly noticed of late in our foreign journals, accounts of extraordinary yields of crops from seeds which had been subjected to soaking in some chemical solutions. Although not disposed to question the accuracy of the results stated, we must still affirm our want of confidence in the excessive merit claimed by them. These preparations are useful in two ways. First, by saturating the seed with substances distastful to its enemies, insects, grubs, and worms; and secondly, by affording to it an element of nutrition for the future plant, it is enabled to push forward vigorously in the first stages of its growth, and send out its roots and leaves rapidly so as to derive an increased amount of nourishment from the soil and atmosphere, beyond other plants which lack this early development of its organs of nutrition; by which means they are not only enabled to reach farther for their food in the soil, and open an additional number of mouths by its leaves and stems to drink in nourishment from the air, but as a consequence of this early, rapid development, plants are frequently enabled to attain a growth which secures them against the injurious and sometimes fatal effects of droughts and insect enemies, and in many cases, to mature their fruits before the approach of frosts. These advantages, and other food yielded directly to the plant, are frequently of great importance to the crop, and may in some instances be worth ten or twenty times the cost of time and expense in the preparation, and are at all times worthy the attention of the farmer. But to claim that they yield all the elements of nutrition to the crop is a perfect absurdity. They afford the same advantage to the plant that early attention to the young of animals does, by helping it so far forward in strength and maturity that it is enabled afterward to gather up its own food, *if it is to be found within its reach.* If soil be deficient for the support of the larger plant, it must as certainly dwindle or die, as will the lamb or calf, if after it is enabled to eat grass, it is not to be had within its reach. We are justified therefore in concluding, that a good soil is, *in every case*, requisite for yielding a large crop, however the seeds may be prepared. We shall be obliged to our correspondents for the results in this treatment of seeds, under any variety of circumstances, of solution, kinds of seeds, description of soil, and results, each minutely and accurately stated.

DISEASE IN POTATOES.

We observe that this subject is being discussed at great length in our own, and European journals. We have given the substance of the most plausible part of these discussions, in the past and present No., under the head of Foreign Agricultural News and Editor's Table. We can scarcely find any two writers agreeing what this disease is; and although in our various rambles in the country, we have paid considerable attention to it, wherever it manifested itself, we are just as much at a loss to know what constitutes it in every case as our cotemporaries; in the absence of more accurate knowledge, therefore, we conclude to say as little as possible about it. We recommend to our farmers and gardeners, one and all, next year, to become accurate and close observers of their potato crops from week to week till the vines flower; and from that time on until harvesting, to *daily* observe them—now and then uncovering the tubers, then splitting the vines open from the tubers up to the tops, examining the whole attentively; when if anything unnatural occurs, and you can not account for it, show the same to some botanist or scientific man who has a good microscope at command. By steadily pursuing this method, you will be able in time to detect the disease, whether it is owing to one cause or many; a remedy then will easily be found. Hundreds of thousands of dollars—yes, we might add millions, will be lost in the United States the present year from the disease in potatoes, it is, therefore, of great importance to the agricultural interest that some remedy be found to stay it.

ODD ROWS OF CORN.

It may be recollected by our readers, that we asserted in our last volume, in giving an account of the "Cereal display" at the American Institute, that we saw one ear of corn there with "*twenty-one rows.*" Whereupon our facetious friends from Alabama to Washington city, and thence back to the interior of Ohio, (to say nothing of various private parties over the whole Union,) each commanding and leading on a redoubtable cohort of witnesses and *disproofs*, commenced a series of public attacks upon our *crib*, literally overwhelming and devouring us, corn, cob, and all; and then to make the matter worse, shouted forth an *io triumphe* to our supposed *peccavi*, of whether we "*ever saw* any man that *ever saw* a *dead* donkey?" No; certainly not, we replied in all meekness; but then, what was better for our argument, we knew we had seen a pig with *seven* legs, *three* tails, and *one* head; all of which *anomalies* the exhibitor of said animal declared, came in consequence of eating corn growing on cobs with "*narra* kurnel nor row alike," so we held our peace till we could see what we should see to substantiate our position. Well, on a late visit to the Hon. John G. Floyd, of Long Island, walking into his corn crib, we picked up three ears of corn, and began incontinently to count the rows, and sure enough, on the last one, we found running about two thirds of the way down the cob from the end, ELEVEN rows, and the other third of the ear contained THIRTEEN rows! We also found at several other places, different ears of corn where the rows passed each other on the cob, making *odd* rows for a longer or shorter space upon them. The above ears are now in our possession ready to be shown to the discomfiture of all the *facetii* of the land! But to be serious, we have seen through life too many freaks of nature not to believe that she could make odd rows of corn, and we are firmly convinced that we were not mistaken in reporting "twenty-one" rows as forming the ear we noticed at the American Institute last year, although we did not get possession of it to show the unbelieving. We shall be obliged to any of our friends who will furnish us with ears of corn containing odd rows, to further substantiate our position that such things do occasionally exist.

NURSERY AND GARDEN OF MESSRS. WINTER & CO.

In the beautiful town of Flushing, on Long Island, about an eighth of a mile from the steamboat landing, on the north side of the main street, in the heart of the village, is the nursery and garden of Messrs. Winter & Co. It occupies twenty-one acres, and is one of the oldest establishments in the state, being a part of the celebrated Linnæan nursery and garden, founded, and for a long time successfully conducted, by the late Mr. Prince. These grounds are well worthy of a visit. They are highly cultivated, and handsomely laid out with spacious avenues running the whole length, bordered by a great variety of flowering shrubs and plants, and ornamental trees, several of which, like the Italian stone-pine, are very rare, and have attained their full stature, forming not only highly delightful, but instructive promenades, to the scientific, as well as the unlearned in horticulture and arboriculture. Convenient seats for visiters to rest themselves, are placed along the walks, in the shady groves of the umbrella magnolia, and beneath the spreading branches of majestic trees. At that period of the year, pre-eminently denominated the season of flowers, the display is very attractive, the roses alone covering an acre of ground, the numberless peonies bursting out with their rich variety of colors, and other flowers dotting the grounds with their brilliant dyes, in great profusion. These are continually followed by others during the whole summer, and in the fall comes a magnificent display of dahlias, of which there is a large collection conveniently planted for inspection. Many of these specimens are truly beautiful. The green-houses also are quite extensive, and are well filled with a good collection, agreeably ornamenting the grounds around during the mild season, with much that is curious and rare.

But Messrs. Winter & Co. have not confined themselves exclusively to the ornamental; for the visiter will find here quite an extensive nursery, embracing the usual variety of apples, pears, plums, peaches, and quinces. They struck us as being in an excellent, healthy, thrifty state, and are well arranged for growth, and convenience in taking up. Great care also is exercised to keep the varieties apart, in such a way as to avoid mistakes in executing orders. When we last visited this establishment, about two months since, we were particularly attracted by the sight of a young tree, clustering more thickly than we ever saw one before with its large splendid fruit of a pale yellow, with a brilliant red cheek on the side approached to the sun, well meriting the designation given to it of the Queen of pears, and making a striking ornament to the garden. Not far from this was a dwarf apple-tree, two feet only in height, on which hung several fair apples of a good size, showing itself among the trees, the very Tom Thumb of fruit-bearers.

There are many other things at this beautiful place which we should like to mention, had we not previously written at such length on the subject of nurseries and gardens; and as Flushing is only a sail of an hour and a half from this city amidst the most delightful scenery on the East river, we trust our readers will avail themselves of a trip thither to admire for themselves. We know of few more delightful excursions, and there are several other establishments in Flushing aside from that of Messrs. Winter & Co., all of which are well worthy a careful inspection.

THE OREGON.

The western papers give us late and interesting information respecting this distant territory, and we have no doubt that we shall soon have a delegate in Congress from it. They have already (at least on paper) a large commercial city, four miles above the mouth of the Wallamette, where town lots are selling at $50 each, being (as they say) a *great sacrifice*, as they are valued at full $200! Pork is worth 10 cents; beef 6 cents; potatoes 40 cents; flour $4 per hundred; butter 25 cents; cattle from $50 to $150 each; and horses the same. A herd of one hundred young cows driven over the mountains would bring $4,000 cash!—a rare chance for drovers. We would advise our friends on the upper Missouri to look to Oregon for a market, rather than to New Orleans; the distances of the two places being about equal from our frontier settlements this side of the Rocky mountains. If cost of transportation of produce were the same, it would be quite another affair. Wild fruit and fowl and fish are very abundant; a good goose sells for 8 rifle charges of powder, and a large salmon for 4—cheap enough. Mill privileges without number; wood and timber plenty, some of the trees growing three hundred feet high! Grass on the prairies all the year round—a grand country this for sheep; land good, and producing well of wheat, corn, &c., &c.; climate mild, light—snows only in winter, which melt as fast as they fall. Laborers wages $1 50 to $3 50 per day—a blessed country for the poor man. Such is the flattering account we have from the emigrants of the Oregon. Who will not take the risk of being scalped by Indians, or devoured by grisly bears, to say nothing of sustaining innumerable hardships for a succession of years, and living free from all moral and civil restraints, to emigrate to the Ultima Thule or last jumping off place of the El Dorado of the final borders of the great illimitable west!

SEVENTEENTH ANNUAL SHOW OF THE AMERICAN INSTITUTE.

THE show and fair for this year was held as usual at Niblo's in Broadway. It opened on the 7th of October, and continued till the 26th. Rather an increased number of visiters attended it, and the exhibition in domestic fabrics, glass-ware, and cutlery, as well as most every kind of manufactures, cabinet furniture, &c., &c., showed a decided improvement. Indeed, such was the variety of articles present, and so substantially were they made, and so highly finished, that they leave little to desire in many things, and show how well now all our reasonable comforts and luxuries can be supplied at home.

Horticultural Department.—This was changed the present year from the second story of the north wing, to the long gallery on a level with the garden. There being much more room here, it gave a better opportunity for the display. The saloon was beautifully fitted up, and decorated with evergreens, garlands, and wreaths; the flowers, fruits, vegetables, and grain, were handsomely arranged, in great abundance, on each side its whole length of upward of 100 feet. There were so many exhibitors, and these things have been so often repeated in our columns, that we fear we shall trespass upon our readers' patience if we attempt to particularize. We can not refrain, however, from mentioning some magnificent grapes from the conservatory of Mr. Cushing, of Massachusetts; also some superb pound pears from his garden. Mr. Bates, of the same state, exhibited very superior cranberries grown on a *dry* soil. To these we add, from other exhibitors, pine apple potatoes; a gloria-mundi apple, weighing 27¾ ounces; fruit of the Osage orange; eight Valparaiso squashes, weighing 581 lbs., all the product of one seed; Otaheita pumpkins; green globe artichokes, a southern vegetable; and Mr. Harmon's splendid varieties of wheat in the head.

Agricultural Implements.—Among the few new things in this department, we noticed a corn-sheller the price of which is $50; its inventor stating that with a one-horse power for driving, it will shell 300 bushels per hour. An almost incredible quantity; but we presume he meant corn in the ear. There were two straw-cutters with different shaped knives than any we have seen before, also an alteration in the endless chain principle of the horse power. We should not like to say that these were any great improvement till we had effectually tested their operation.

Silk Convention.—This was opened on the 9th at the repository of the American Institute, in the Park, and continued nearly three days. Many interesting questions were discussed, and a mass of facts collected to be embodied in a second report. Within two years there has been a vast increase in the manufacture of silk in this country, an increase amounting it is supposed, to three or four fold. In the growing of silk there has been also a large advance, an advance more difficult to estimate, as the returns are incomplete. We know enough, however, to be assured that the business has *essentially* surmounted the struggles of its infancy, and its miserable nursing, and is now on its feet, and commanding the respect, and confidence of intelligent men throughout the country.

The question of *open feeding*, so fully established by the results published in the last report, is yet more confirmed by those of the present season. The Northampton Association in Massachusetts has made in this way 150 lbs. reeled silk, with the most entire success. John M. Summy, of Manheim, Lancaster county, Pennsylvania, has made the same quantity in the same way. Others, in great numbers, have tested the question, and are perfectly satisfied that worms *must* have the pure air of heaven, and the more the better, except in *very early*, or *very late* feeding, and yet Miss Rapp, and some others, have had abundant success in feeding on the artificial plan.

The silk goods this year at the fair, exceed in quantity and quality anything before exhibited, and the same may be said of that at the Mechanics' fair in Boston, last month; thus showing that this interesting branch of home industry is making steady and sure advances.

Another fact. Almost all who are now engaged in growing silk, are preparing to enlarge their operations; and many new mulberry orchards will be planted the following spring.

The report of all these doings will be speedily put to press, and will doubtless prove a document exceeding in interest that of last year. It will be about the same size. It is expected that funds will be furnished *gratuitously* for *stereotyping* it, so that it may be sold in large quantities at the cost of paper, ink, and presswork. It is intended that *fifty thousand copies* shall be scattered over the land. Orders are solicited. Returns from silk-growers, if forwarded *at once*, to Isaac R. Barbour, Esq., of Oxford, Massachusetts, will not be too late to be inserted.

The silk cause is indebted to Mr. Van Schaick, of this city, for a recent donation of $1,000, to be expended by the American Institute, in promoting this business.

Farmers' Convention.—This was held at the same place as above, on the 11th and 12th. It was well attended, and the subject of agriculture generally discussed. Quite a number of letters from distinguished farmers, who could not attend, were received and read. Resolutions were passed, calling upon the United States government to establish a Home Department at Washington, with an officer to superintend it having a seat in the cabinet like the other secretaries. The convention then adjourned, to meet next year, after a gratifying and interesting session.

Cattle Show.—This again took place at the Vauxhall Garden, opening on the 16th, and continuing through the 17th. The exhibition of horses was quite superior to that of last year; likewise in working-oxen; but of Durhams, especially in bulls, far inferior. Mr. Griswold showed a very superior Ayrshire cow, both for fineness of point and milking qualities. Her form would do credit to a Durham, especially in the brisket, loin, and quarter: nor was she inferior in handling. Indeed, she is the best animal of this breed we have yet seen in the United States. She was imported from one of the best herds in Scotland, and can be had for two hundred dollars.

At the close of the exhibition, a grand procession was formed of cattle, &c., attached to cars and vehicles of different kinds, fitted up with considerable taste with a display of vegetables, sheafs of grain, corn-stalks, &c., &c. Mr. Ellsworth, of Connecticut, was marshal of the day. A band of music headed the procession, and among other things assisting to form it, were two gentlemen on horseback, with each a fair lady behind him, on a pillion! Rather an odd spectacle this for the city of New York, and it attracted great attention from the crowds in Broadway. One of the pillions used on this occasion, was made fifty years ago, by Mr. Daniel Wadsworth, of Hartford, Connecticut.

Plowing and Spading Match.—This interesting exhibition, after having been twice postponed on account of the weather, came off on the 19th, at Fordham, in Westchester county, about 12 miles from New York. There was a very respectable number in attendance, although the forbidding appearance of the weather in the early part of the day must have kept a good many at home.

The spading match took place first. In this case there were six candidates for the prizes offered, which were as follows:—For the best spading of ground twenty feet long and ten feet wide, silver cup, value eight dollars; second best, silver medal; third best, diploma.

This exhibited great interest. The work was done in fine style, and the prizes awarded as follows:

First premium to Joseph Lodge; time 23 minutes.

Second premium to William P. Lodge; time 30 minutes.

Third premium to Matthew Roach; time 34 minutes.

After this contest was disposed of, the teams entered for the plowing match were ordered to fall into line. There were eleven competitors, seven of whose teams were oxen and four horses.

The regulations were, for the best plowing, performed in one hour on one eighth of an acre of greensward, a silver cup, value eight dollars; second best, silver medal; third best, diploma.

The list of the names, and the order in which the ground was allotted to them, stood thus:

No. 1. Matthew Ray, West Farms, Westchester county, a pair of horses.
" 2. John Savage, same place, a pair of oxen.
" 3. John Ray, Morrisania, Westchester co. do.
" 4. Moses Rogers, West Farms, do. do.
" 5. Lewis G. Morris, Fordham, do. do.
" 6. Oliver Cromwell, do. do. do.
" 7. (withdrawn.)
" 8. Henry Moore, Ithaca, Tompkins co. horses.
" 9. C. Bathgate, jr., Morrisania, W. co. do.
" 10. Jeremiah Tiers, Yonkers, do. oxen.
" 11. Corns. Bergen, Brooklyn, Kings co. horses.

They all started off in gay style, and accomplished the work in even less time than was expected, the teams dropping out in the following order: No. 4 first, 9 second, 11 third, 6 fourth, 2, 3, and 10, nearly together, fifth; No. 8 sixth, No. 1 seventh, No. 5 last. No. 8, was a side hill plow; No. 9, Burrell's wheel plow; No. 11, Mr. Bergen's own plow; No. 4, did the work in 19 minutes; No. 9, in 19 minutes, 5 seconds; the longest time was 30 minutes.

The Committee awarded the premiums as follows:

First premium of silver cup to John Ray, Morrisania, Westchester county.

Second do. silver medal to Moses Rogers, of West Farms, Westchester county.

Third do. diploma to Matthew Ray, West Farms, do.

After the matches were over the Hon. Henry Meigs made the speech on the occasion; Mr. Ellsworth, of Connecticut, also addressed the assembly. The Committees adjourned to Berrian's tavern, at Fordham, and dined, and then declared the premiums.

Altogether the seventeenth exhibition of the American Institute was highly attractive, and more varied than usual. We shall give the list of premiums next month.

QUEENS COUNTY SHOW.

This came off at the pleasant village of Jamaica, on the 10th of October. The weather was very fine, and so far as the crowds of highly respectable people of both sexes were concerned, it was a capital show. But the animals present were few and a very *unfair* representation of what Queens county is able to turn out; but so long as our farmers are contented to make their appearance at such places, and boast of what they have "*got at home*," and lament then that they did not bring them forward, we must ever expect to see a poor exhibition. Of the stock present, the best display by far was in horses; and the next best in Durham cattle. There were also some good grades and natives on the ground. Of sheep and swine very few were present, and only one pair of mules.

The seeds and grain, at the court-house, were highly to be commended, especially the corn, which was the most superb and varied display we have yet seen at any show whatever. The vegetable department, we think, was quite equal to that of seeds. Fruit we noticed in great abundance and variety. A quince was exhibited weighing 26 ounces, and 13 apples weighing 15½ lbs. The quince beats all they have recently been boasting about in Massachusetts, the largest there weighing only 23 ounces. The butter exhibited struck us as being quite superior; of cheese we scarcely saw any. The domestic fabrics gave evidence of the taste and industry of the ladies in Queens county, and it afforded us great pleasure to notice so many of them present, taking such interest as they seemed to in the whole exhibition. We can not but think this one of the pleasantest features of such shows, and we trust that the ladies will continue their good offices in their behalf. The floral department was well filled, considering the season. We were particularly struck with a magnificent cornucopia, exhibited by Mr. Samuel Youngs, of Oyster Bay. The exterior of it was an envelope of splendid dahlias, beautiful roses, and quite a variety of other choice flowers. The horn was filled with grapes, pears, peaches, and strawberries, and as it rested on the show-stand it seemed indeed a horn of plenty. Mr. Furman, of Brooklyn, made the speech on the occasion, which was well received by a large auditory.

We were highly gratified by being present at this county show, but we think it would be better if the whole of Long Island would unite in one. If the people would do this, and turn out with what they have "got at home," they would make a superb show, and one which would draw a considerable concourse of visiters from the neighboring counties, and especially from this city. We have not room to give even the most important premiums, nor do we think this particularly necessary, since they appeared in several of the county papers.

PREMATURE BIRTHS.

ALL animals after casting their young prematurely, are liable not to breed soon again. The reason is, that the womb and the parts connected with it are injured by the unnatural parturition, and require time to strengthen. If, therefore, as soon as the females come in heat they are again put to the male, conception is not likely to follow. To remedy this, we have kept them away from the male, however often they might desire him, till the womb had time to strengthen, when they would again become breeders. If the females were mares or cows, we kept them from the male six months, or sometimes a year or more; if a ewe, four to eight months; if a sow, three to six months or more. During this time they were well fed and cared for, and a short time before being put to breed, reduced to a moderate condition. The male now made use of, we selected for being rather young than old, and as vigorous an animal as possible. After conception, the animals were kept quiet, and great care taken not to have them placed under the same circumstances as they were when first overtaken with premature births; as it must be recollected, that like causes would be liable to produce like effects.

KEEPING PUMPKINS.

PUMPKINS for stock are best kept in a dry loft with the flooring quite open, so as to allow the air to circulate as freely as possible between them. Were it not that they take up so much room, we should prefer storing them in a single tier; but usually, for want of this, when a large crop is to be secured, they must be piled upon each other. In this case, we would recommend their not being placed more than three or four deep. If piled together in too large heaps, they gather moisture and rot rapidly. When frozen, they may be preserved a long time; but they should be cooked before giving them to the stock, otherwise they may do them great injury. On the whole, we prefer feeding our pumpkins as fast as possible after ripening, and before the cold weather sets in. They are of a cool, watery nature, and unless cooked, we doubt whether they are near as beneficial to animals in frosty weather as they are when it is milder, or indeed any kind of fruit or root, though stock of a good breed will usually do well upon them.

FATTING ANIMALS.

As cold weather is rapidly coming on, now is the time for the farmer to push forward the fatting of his animals as rapidly as possible. His beef and mutton ought to be in the market by the end of the month; and the pork as soon as the weather is cold enough to cool the hogs off well, and the cutting and salting can be prosecuted without endangering the tainting of the meat. Our farmers little know how much they lose by not fatting their animals early in the fall. First, they fat 25 to 50, and some assert even 100 per cent. faster in mild weather than they do in severe cold, on the same amount of food. What a great saving this would be. Second, by feeding out roots and grain as fast as ripe and gathered, it saves the trouble and risk of storing. Third, the animals are more comfortable, and it is less labor to prepare their food for them, and feed and keep them clean, during November than later. Lastly, the meat which first comes to market usually brings the highest price; and at any rate, if sold three months in advance of his neighbors, one at least saves that amount of interest on the money he gets for his produce, beside considerable risk in keeping the animals themselves.

PRICES OF FANCY POULTRY.

HAVING been so frequently asked the prices of fancy birds, we give them below as nearly as possible. It must be premised, however, that they vary greatly according to their being scarce or plenty in market, and also according to the kind, and the *fancy* of breeders. To these prices should be added postage of letters, if not prepaid; caging, cartage, and shipping; all of which matters are pretty sufficiently troublesome.

Pigeons, fan-tails, per pair,	-	$1 25	to	2 50
tumblers, "	- -	1 00	"	2 00
English pouters,	-	4 00	"	7 00
carriers, per pair,	- -	5 00	"	20 00
Ducks of different kinds, per pair,		2 00	"	4 00
Bantam fowls,	"	1 00	"	2 00
Poland do	"	2 50	"	3 50
Dorking do	"	4 00	"	5 00
Small China geese,	"	3 00	"	4 00
Large do do	"	5 00	"	8 00
Bremen do	"	2 00	"	4 00
Wild, do	"	5 00	"	6 00
Guinea or African goose,	"	10 00	"	15 00
Turkeys, pure white,	"	2 50	"	4 00
Rabbits, according to variety,	"	1 00	"	10 00

Dorkings, with the exception of a few cocks, we are sorry to say, can not be had this year. Several persons in this vicinity have made arrangements to breed a few dozen pairs for sale next season, and we hope a year hence those who are in want of them can be supplied. The small China geese priced above, are very fine and bloodlike, are as hardy as ducks, and said to be as great layers.

THE TENNESSEE AGRICULTURIST.—We have often requested our cotemporaries, when inserting anything in their journals, to which they wished to call our attention, as an act of courtesy, not only to mark it, but to fold up the paper with the said marked article outside, so that it may immediately be seen; otherwise, as we have little time to bestow upon our exchanges, it will be very likely to pass unregarded. We are indebted to a friend for pointing out several articles to us in the T. A., which we now proceed to notice.

Who is Americus? To this question of the Tennessee Agriculturist, we answer, *that* is best known to ourselves. If for any particular reason, we choose to insert anonymous communications, we shall do so; and all questions of what and who the authors are, we shall consider as impertinences which had better be addressed to some other quarter. But if the T. A. "claims to know" who Americus is, we wonder it should give itself the trouble of asking.

Another point. As Americus does not own a single "old Merino" to our knowledge, and does not very soon expect to, we suspect that the T. A. will be obliged to wait sometime before it sees an "advertisement appear" from him, "offering some for sale;" nor can he very well now be engaged "in writing up his own sheep," however much he may be supposed "to undervalue his neighbors." There are some folks in this world who seem to entertain the opinion, that no one can move, speak, or write, unless he has an *interested* motive in so doing.

South-Down vs. Grandee's Wool.—The same paper above, asserts, that it can show samples of South-Down wool of a better quality than those it has from Grandee. We do not know what the editor of the Tennessee Agriculturist may have in his possession, but here is an offer, viz: we will give him *one thousand dollars* for every pure bred South-Down sheep that he will deliver to us in this city within a year, whose whole fleece clean washed, not to say "is better," but within TEN CENTS per pound, as fine as samples of wool of Grandee's fleece which we can produce, or indeed that are as good as the poorest Rambouillet fleece which can be found in the Hartford flock. The South-Down is acknowledged to be one of the hardiest sheep, and handsomest formed, in existence; the mutton, also, is very superior; if to these good qualities they can now show them in Tennessee, of such superior wool, they have a treasure indeed which our breeders here would be very glad to share with them, even at the most extravagant prices.

LECTURES UPON AGRICULTURAL CHEMISTRY AMONG THE FARMERS.—We have recently received a letter from Dr. Raymond, of Buffalo, stating that it is his intention to make a tour through different parts of the state the ensuing winter, for the purpose of delivering a course of chemical lectures to the farmers, and arouse their attention to the study of so much of this important science as can be made practically beneficial to them. The course will consist of from six to ten lectures. Each lecture will be delivered independent of the others. Admittance for each person, one shilling in the villages, and 25 cents in the cities. Before Agricultural Clubs, $5 per night, for which he will give 50 tickets. These terms are extremely low, and as Dr. Raymond is quite conversant with his subject, we really hope that the farmers will encourage him with a full attendance upon his lectures, wherever he may be found among them.

WOOL EXPORTED TO EUROPE.—One hundred bales, containing 20,000 lbs. of fine Saxon Merino wool, grown in the United States, was exported to England in the Patrick Henry, sailed 6th of October. It was stated in the papers that sixty cents per pound was paid for it, but this was a mistake, the purchaser only gave about fifty cents. This price, however, is a remunerating one, and sheep may be made to net $2 per head per annum on the average, which is a good business for the farmer, paying much better than grain and grass, or fatting pork, at present rates. We hope to see our flocks yearly increase.

TO OUR READERS.—We are particularly desirous of having our fourth volume superior to any of its predecessors, and hope, therefore, that all who can give us new matters of fact, experiments of any kind, or communications interesting to the agriculturist on subjects not yet particularly touched upon in this paper, will not hesitate to do so at once. We are likewise desirous to obtain drawings of plants, vegetables, and animals; any new agricultural implements, or improvements in them; houses, barns, sheds, piggeries, and poultry-houses; plans of division farms; fences, gates, and indeed anything appertaining to agriculture; all of which, if not too costly, we will get engraved as illustrations to this periodical. We hope that our friends will not hesitate in these matters. They must recollect that this journal has a wide circulation, and what appears very common and familiar to some, is strange and new to others, and regarded and perused with much interest and instruction.

AGRICULTURAL EXPORTS.—It will be seen from the following table of imports of American beef, pork, lard, and cheese, into Liverpool, the year ending August 31st, that our exports of these articles, from almost nothing three years ago, have become quite important; and what is more to the purpose, we think they are very likely to increase in nearly an equal ratio for three years to come.

	BEEF.		PORK.		LARD.		CHEESE.	
	brls.	*tecs.*	*brls.*	*tecs.*	*brls.*	*kegs.*	*caks.*	*bxs.*
1842,	3,367	——	9,113	60	2,125	39,174	1,841	4,732
1843,	5,457	2,083	8,001	33	12,326	22,857	2,105	3,619
1844,	9,812	10,789	15,933	33	25,585	30,425	6,504	22,396

POSTAGE—FRANKING.

In giving the rates of postage in the Agriculturist Almanac, Mr. Allen states that "members of Congress receive and send letters *free*, during and for sixty days before and after session of Congress." If he will look into the "*amended*" P. O. law, he will see that they have the franking privilege during the whole vacation of Congress. And moreover, that for certain kinds of correspondence they are not limited to the "half ounce" (*a*) but may send and receive free any package, nothing being said about weight. This is an additional reason why we should urge on the P. O. reform. "M. C.'s" have not forgotten to provide for themselves, if they have forgotten [neglected] the tax-payers—the people. H.

(*a*) Post Masters are confined to the "half ounce" franking privilege; members of Congress can at all times frank *two ounces;* and heavier documents, such as piano-fortes, cases of books, huge packages of political pamphlets, *old clothes, and linen sent home to be washed*, they get done by a stretch of the law through the Clerk of the House also free.

Agriculture in Scotland—No. 2.

Draining.—About two weeks since, during my attendance of the annual show of the Highland Agricultural Society, held this year in Glasgow, I had the pleasure of hearing an address upon draining, from Mr. Smith of Deanston, who is in this country considered an oracle upon that subject. So far as my knowledge extends, I was the only American present, but I wished that his observations might have been heard by every farmer of our country. My sketch must be brief and therefore imperfect, yet it may nevertheless present an outline of an address, which coming from such a source, is most worthy of confidence.

Mr. Smith commenced, by stating that the chief evil we have to contend with, arises from the rain that falls upon the surface. The plan of forming high narrow ridges is but a partial remedy; the crop may be good upon the crown of the ridge, but the furrow and lower parts get a double share of water and are always inferior; besides, the rain running over the surface washes out and carries away a part of the manure and of the soluble and most valuable portions of the soil. Water always forms a level, and accumulates at a certain distance below the surface; when a field is drained thoroughly, this level is removed to the bottom of the drains. The rains falling upon the surface descend to the level and flow sideways to the drains. In the stiffest clay soils, this takes place, for such soils shrink in drying, and thus gradually become intersected with cracks, so that they are often found to drain quicker than any others. As the water passes down, of course the air follows, and fills up the vacuum; in this manner a supply of fresh air is introduced into the soil and obtains access to the roots of the plants. Noxious substances also, such as oxide of iron, which always accumulate below the level of the water, and form a barrier to the downward progress of the roots, are gradually dissolved and carried down the drains, thus purifying a great depth of soil, and placing within reach of the growing crop an unexhausted stratum of earth. Extensive experience during the excessive dry weather of the last season, has shown that drained fields withstand the drought far better than the undrained. Facts previously cited show how this is to be accounted for. On the drained land, the roots may descend in search of water the whole depth of the drains, and encounter no noxious substance; while on undrained, they soon find something which checks their growth.

The top of the drain should be below the limit of the subsoil plow. With tiles 2½ feet for the bottom may answer, but 3 feet is better. They should be laid off in parallel lines straight down the hill. There is *no necessity* for *oblique lines* to cut off the springs; the water always finds its level, and each parallel drain discharges itself at great advantage. They should be between 16 and 21 feet apart; closer than 16 feet they might let off the water too freely, without filtering sufficient; it ought to pass into the drains perfectly clear. In particular cases, of course, undulations of surface make catch-drains necessary. The great point in cutting, is to make the drains as narrow as possible, a turn of the plow may take out 8 or 9 inches at first and a narrow spade do the rest. Stone drains if *properly executed* are as effective as tiles. They should be made of stones broken to the size of a hen's egg and need no open space at the bottom. Great care is to be taken in covering; the best material is a thin turf, carefully cut and overlapped; the earth should be *tramped* upon it and filled to the surface as *compactly* as possible. From 6 to 8 inches and even less, of broken stone are perfectly effectual, and drains of this description have been found in excellent order 20 years after they were made. Much stress is laid upon beating and compacting the soil above the stones; no water should find its way into the drain except from the side. If tiles are used they should have soles; economy should not come in competition with security.

When the soil is well drained, the next step is to stir it as deeply and thoroughly as possible; for this purpose the subsoil plow is the best implement. Care should be taken, however, in case of tenacious clay soils to wait for a year or two, as hasty subsoiling of them would produce very bad effects. In some stony land it might be necessary to use the spade or fork. As the subsoil becomes ameliorated by the action of water and access of air, it may, by trench plowing, be with great benefit gradually brought up. Mr. Smith has attained on his own farm a workable depth of 16 inches of good mould.

I have now given the principal points of this lecture, which, delivered at the close of a public breakfast of the Highland society, was listened to with marked attention by a large audience. Each position was strengthened by *facts*, drawn either from the extensive experience of the speaker or that of others. At the close, the chairman, the Duke of Montrose corroborated the assertion of Mr. Smith that drained land bore drought better than undrained.

The great body of American farmers, though recognising perhaps in general terms the importance of this subject, have very little idea of its real extent, only thinking of drains in connexion with bogs and swamps; they would be surprised to hear that a very large proportion of their *cultivated fields* would be at once doubled in value by the introduction of drains. It is considered in this country that the increased value of two years' crops, or at the most three, repays the whole outlay. Some high authorities contend that *all land* would be benefited by drains. I am hardly prepared to say this; but am most desirous that our farmers should not fall behind those of this country in their attention to so important a subject.

JOHN P. NORTON.

Edinburg, August 21, 1844.

PLANT-LICE DESTROYED BY LADYBIRDS.

To no man is the study of natural history of more practical benefit than to the agriculturist, that he may learn what are his real enemies, and how to distinguish friends from foes. I once saw a gentleman of wealth and intelligence, in the south, busily engaged in picking off from his cotton and destroying the ladybirds (*coccinellæ*). On my inquiring the reason, he informed me that the cotton was infested with hosts of plant-lice (*aphides*), and that they were produced from these beetles. He was confirmed in this opinion by the two being always associated together. Wherever the lice were, there was the ladybird. He was quite astonished when I informed him that the aphides constitute the regular and sole food of the ladybird, which seeks them out and devours them continually, and that he had been promoting the breed of a pernicious insect, by blindly destroying another race which God had appointed to keep them down. CANADIAN NATURALIST.

WOOL-GROWING.

THERE is every evidence that we shall have for years to come, a large and profitable demand for wool. The establishment of a reasonable protective tariff for the raw material, as well as the manufactured article, will, if persevered in, of which we can not allow ourselves to entertain a doubt, afford remunerating prices to the wool-growers of our country, till we have reached a production fully equivalent to the demand. What data may be assumed, as furnishing a correct estimate of the proper maximum of supply, would probably puzzle the shrewdest writers on political economy. We have, as elements properly entering into this estimate,

1. The ;quantity now raised in the United States beyond the coarse Smyrna and South American wools, costing 7 cents and under per lb., at the place whence last imported, on which the duty now levied is 3 cents per lb., and 5 per cent. duty. On all wool costing over 7 cents per lb., the duty is 3 cents per lb., and 30 per cent. ad valorem.

2. The gradual substitution of a better grade of wool, (as the supply augments and becomes cheaper,) for carpets, blankets, and many of the coarser fabrics, which are now made from the coarse wool above-mentioned; as it is an established fact, that an equal weight of a fine staple, is much more durable than the same quantity of an inferior grade.

3. The supply of the finer sorts of Saxon wool, now imported for the best qualities of broadcloth, cassimeres, &c. I am not aware of the quantity of this description of wool annually imported under our present tariff, but judge it to be considerable, from the fact that I was assured last year, by a manufacturer, that he had just ordered 50,000 lbs.; and a dealer told me that he had imported from London (the great wool market not only for England, but for the continent of Europe also) a much larger amount, for consumption in the eastern states, during the last season.

4. The rapid increase of our own woollen manufacturers, (our tariff remaining as it is,) and the manufacturing within ourselves, of nearly all the finer descriptions now imported, of broadcloths, cassimeres, fancy goods, shawls, bocking, carpets, and rugs of the choicest qualities, (Brussels, Royal Wiltons, &c.,) blankets, worsted stuffs, bombazets, bombazines, mousselines de laine, &c., &c.; the raw material for which, is in all cases, furnished of a foreign growth.

5. The increasing demand from the increase of our population.

6. A demand augmented beyond the ratio of increasing population, consequent upon the prosperity of the country and the diffusion of wealth, which must inevitably accrue to our country, if we have the wisdom to maintain our present pacific relations abroad, and our protective policy at home.

7. The application of woollen fabrics to new and unforeseen purposes, as our manufacturers advance; such as their use by paper-makers, carriage-makers, &c.; and their substitution for leather, cotton, silk, furs, &c.

8. The eventual exportation of wool, and the manufactured article to foreign countries.

That the exportation of wool from the United States is not a remote or improbable event, the policy of our own and foreign nations continuing as they now are, will satisfactorily appear to intelligent minds, on a slight investigation. We have, as peculiar advantages for the production of wool in this country,

1. Millions of acres of unoccupied land, every way precisely adapted to this object, a large portion of which, is not suited to any other profitable production. Thus we have, in addition to the measureless acres of prairie and other fertile, tillable land in the west and south, the great chain of the Allegany and its collateral mountains, reaching through twelve degrees of latitude and as many of longitude, throughout nearly their whole length and breadth, but especially as they recede from the north; all of which vast piles, and the innumerable valleys that everywhere skirt their sides, and which are now entirely unused, or occupied only to a very limited extent, are destined ere long, to the support of countless flocks.

2. The adaptation of our soil and climate to the growth of a fine staple of wool; and the foregoing, together with a dry and rolling surface of land, and innumerable supplies of fresh water, which

almost everywhere abound, secure to sheep a healthful growth, and vigorous constitution.

3. The economy of labor in producing wool. The average time of an intelligent, able-bodied man throughout the year, will, on a good farm, well arranged for the purpose, and with suitable fixtures, provide the winter food, and give all the attention required, to a flock of 500 at the north, 600 in the middle, and probably, even more than this in the southern states.

We have examples the present season, of a choice Saxon flock producing 2⅞ lbs. of wool each, at an average price of 68 cents, or nearly $2 per head; and of another Merino flock producing over 5 lbs. per head at 48 cents; or $2.50 each. This would yield, for the productive labor of a single individual, inclusive of capital for the flock, land, and fixtures, (and many flock-masters consider the lambs a full equivalent for all these,) from $1,000 to $1,500 per annum. What other agricultural occupation will produce one half as much? The above statement is predicated on the choicest sheep; but as these are as easily supported as the worst, it is not presuming too much on the intelligence of Americans, to suppose they will not long hesitate to follow where it is manifest their interest leads.

4. The cheapness of transportation. A pound of good wool in an European market is worth from 30 to 100 cents, and some, when thoroughly cleansed, even much more than this. Flour and grain is worth from 2 to 4 cents per lb., and beef, pork, cheese, lard, &c., from 5 to 10 cents; and although from its increased bulk the former may be charged at double the ship-freight of the latter, yet this would be hardly appreciable in its market value; while, with the other agricultural products, it sometimes reaches beyond 50 per cent. of their worth, even in the place of consumption.

5. England is the great wool market for the world, and although it is computed she has 50,000,000 of sheep, they but partially supply her own manufacturers. And England manufactures a vast amount of the finest kinds of wool, scarcely a pound of which she raises within her own island territory. Her supply for all this comes from abroad, and after the quantity sent by her Australian and other provinces, she will as readily take of the United States as any foreign nation. It is probable that a large portion of her sheep lands are unsuited to the production of fine wool, and it is certain her management and policy are decidedly against it. Food for her millions of human beings, as well as food for her woollen machinery, is her object; hence her policy, and the almost universal practice of keeping the mutton sheep, the long and middle wools, neither of which can ever make anything but the coarser fabrics. The duty now levied on wool in England is but one cent per lb. on its value of 24 cents or under, and two cents per lb. on wool costing over 24 cents per lb.

6. The restrictive policy adopted almost throughout Europe, with regard to our agricultural products, while they amount to an entire prohibition of nearly every article of human consumption, (wholesome, nutritious, and abundant food, being generally deemed by their rulers articles of superfluity to the ruled;) yet what is essential to them as articles of traffic or manufacture, out of which money can be made, as cotton, wool, &c., they readily admit on favorable terms. A large part of Europe is now so fully stocked with people, as to be incapable of multiplying sheep in the ratio of the demand for their fleeces. And if the peace policy is to be continued there, as we see no improbability of its being, its increase of inhabitants must soon drive out sheep where they now exist. The ratio of supply will be, therefore, inversely as the demand. Where, then, can that deficiency be as well made up as in America? and what more rational than for the shepherds of hundreds there, to transfer their flocks to this country, and become the shepherds of thousands here?

With all our peculiar advantages then, of cheap land, every way adapted in climate, soil, and position, to the healthful maturity of the animal, and the perfection of the staple of the wool; the large returns for the labor bestowed; the trifling cost of transportation; the incapacity of the largest manufacturing kingdom in the world, (now and always most nearly and most extensively connected with us in commerce,) for raising any of the fine wools, which enter largely into her consumption; and finally, the restrictive policy of foreign nations, which exclude our bread-stuffs and eatables, but admit, wherever they can use them advantageously, the raw material for their manufactures, there is every probability, ere long, of a large demand for wool abroad.

One word to our sheep-owners, as to the kind of wool to be grown. The finer you can get the wool, with a large fleece, and good constitution in the animal bearing it, the more profit. In the neighborhood of good markets for mutton, there is an exception in favor of the mutton sheep, to the extent of the demand for the carcase. And it is probable there can be thus raised, all the long wools required for our worsted stuffs; if not, it will be profitable extending the long wools into the interior, to the full supply of that demand. But remote from markets, the best Merinos, and most hardy Saxons, are beyond all doubt the most profitable. It will pay liberally to the flock-master, to select the very best the United States affords, and we could wish, and hope, they may see their own interest in immediately selecting some of the best specimens from the royal flocks in France and Spain, to refresh and re-invigorate the flocks, impaired by injudicious mixtures in our own country.

It may be proper enough to add, that *soil* has much to do with the softness and perfection of the fleece. A clay or loamy soil improves the fibre of the wool, making it finer and more soft and pliable; a sandy or silicious, and a calcareous or limestone soil, renders it stiff and harsh. The first improves, the last deteriorates, not only the fleece of the individual, but also the progeny. Thus, time may produce an essential change in the character of the race, without reference to any other consideration, than the quality of the soil on which they are reared and sustained.

Climate, and the rutting time, we ought to look to also, on every philosophical principle, as having an influence on the fibre of wool. No exception occurs to us of animals in equatorial regions, possessing a large, close, and fine covering; and none in the arctic, of such as have thin, hairy coats. Nature seems to have made no exceptions to this most rational and merciful arrangement. Should we not therefore look, with every probability, to our fine-woolled sheep sustaining the character of their fleece at the north, and to a deterioration of the same class at the south, in future generations? We know that the reverse of this is claimed by some observing and intelligent breeders of much experience, but we apprehend without sufficient data. We can easily conceive of sheep removed southward, improving the softness of their fleece from the increased perspiration and yolk thrown into it, from the higher temperature to which they are subjected. But this is a forced and unnatural effect, which nature, by her slow yet certain operations, we think, will effectually exert herself in removing from successive generations. By taking advantage of the period of conception, and having this take place when the parents are under the influence of the severest cold of the climate, which should be continued with the dam during gestation, if possible, may we not expect that the fœtus will have impressed upon it, which it will maintain through its maturity, a constitution and covering best suited to the condition of its incipient existence? Reason, we think, must teach us to look for such a result; and by this means, the prejudicial effects of climate may be arrested, or partially postponed; though in the end, the forementioned result seems inevitable. What but the scorching sun of Africa has given its present constitution to the negro; and the mildness of the temperate zones the character and constitution of the Circassian and European races? It is readily admitted, that the mountainous region of the south is not liable to this objection, as their increasing altitude diminishes the temperature, and is a full equivalent to a removal north. Nor do I see any reasonable objection to the rearing of the fine-woolled sheep on the low lands of the south, as any anticipated deterioration of staple, may be, in a great degree, obviated by the use of bucks reared in the north.

When the great advantage is considered, of the ease and economy of renovating soils and sustaining them in a high degree of fertility, by the keeping of sheep, I need not urge the system upon the intelligent agriculturist. Indeed, where lands have been cropped interminably, with wheat, rye, and corn, at the north, and wheat, corn, tobacco, and cotton, at the south, I know of no other self-sustaining system of renovation, that can be adopted. Lime and plaster, where economically obtained, may do it partially, but other manures will be necessary to carry out the work of regeneration. Where shall they be procured at a cost that will enable their owners to sustain a successful competition with the occupants of newer and more fertile lands, somewhat more remote? We can conceive of nothing more suited to the object than sheep. They clean the land of almost every noxious weed, drop most of their manure on the highest lands, where most needed, and require little attention, for all of which they pay double; first, in the produce of a lamb, and second, in their fleece. They are also certain to build up, in an intelligent, industrious community, a manufacturing policy, which gives a profitable and pleasant employment to a supernumerary population; affords an enlarged market for miscellaneous agricultural productions, and, in addition to all their collateral advantages, furnishes to the country, their fabrics at a cost, lessened by all the expenses of a double transportation. Surely, it is needless to urge the adoption of a system, fraught with so many advantages, upon the intelligent planters of the south and west, a people who have, in less than half a century, extended the annual production of cotton, from 2,000,000 to 600,000,000 lbs. The energy displayed in augmenting a single crop, three hundred-fold, in so brief a time, is adequate to the successful adoption of any policy, commended to them by so many intrinsic advantages.

R. L. Allen.

Buffalo, Sept. 20, 1844.

MANURE OF PIGEONS.

While the ships of England and America are coursing the oceans in pursuit of guano, I would call the attention of our agriculturists, to a manure of similar origin, and possessing the same properties, that abounds in many places in their own forests; which may be had for the labor of collecting. I allude to the droppings of the wild pigeon. It is well known that these birds live together in flocks of myriads according to Audubon, that their sojourn at a place is not limited by the season but by the supply of food. This great naturalist remarks that he has seen the earth covered by their evacuations, like snow to the depth of several inches. The use of this manure is of very ancient origin. During the great famine that prevailed in Samaria, in the time of Elisha, (2 Kings vi. 25,) the fourth of a cab of dove's dung sold for five pieces of silver. It is highly prized in Persia at this day. Many pigeon-houses are constructed for the sole purpose of collecting the droppings of the birds. It is there used for manuring melons; the finest in the world are raised in that country. In Belgium it is applied as a top-dressing to flax. They pay for it at the rate of five cents for the evacuation of each bird for the year.

The great value of the discharges of birds as a manure, arises from their urine being deposited with their fæces. In animals the salts of urine are separated by the kidneys in solution in water, the secretion passes down and collects in the bladder. In birds, on the contrary, the salts of urine are separated by the kidneys in a solid form with water barely sufficient to convey them through the tube to the common outlet. Birds have no urinary bladder. The white portion of their evacuation comes from the kidney and is essentially the same salts that may be obtained from human urine by evaporation. The colored part comes from the intestines, and is disposed to undergo fermentation. During this change some of the salts are decomposed, and a portion is washed into the soil. The remainder which will not admit of these changes, is the most valuable to the agriculturist.

I have have examined a portion of the evacuations of the domestic pigeon. It contains uria (which may be considered as carbonate of ammonia,) muriate of ammonia, phosphate of lime, phosphate of ammonia, and magnesia, uric acid, and a large proportion of vegetable and animal matter in the most favorable state to become the food of plants. In collecting this manure, a portion of the soil should be taken up with it, as it contains a part of the soluble salts. I consider this substance of about one tenth the value of guano. That one ton of it to the acre would be a good dressing for wheat or any other crop that requires much nitrogen or phosphoric acid.

Charles H. Raymond, M. D.
Lecturer on Agricultural Chemistry.
Buffalo, Sept. 16, 1844.

GUANO MANURE.

Guano, whether from Peru or Africa, may be separated into two marked and important kinds of ingredients: the volatile, or easily evaporable, and the fixed or permanent ingredients.

The volatile ingredients are those which evaporate readily at the common temperature of the atmosphere, which contain the ammonia of the guano, and are the nitrogenous or azotised ingredients. They consist chiefly of carbonate, oxalate, phosphate, and *humate* of ammonia; they are contained in all barn-yard and stable manure, and are of the utmost importance to vegetation, for there is not a portion of the vegetable without nitrogen in some shape or other; they powerfully excite vegetable action, and are consequently indispensable to produce a luxuriance of growth. It is to this azotised ingredient that is chiefly to be attributed the surprising *growth* of plants watered with solution of guano, for nearly all these ammoniacal ingredients are soluble in water. Before I quit this subject let me say a few words on the humate of ammonia.

Of all the nitrogenous compounds, this retains the ammonia with the greatest tenacity—humus is found in all soils which contain organic matter. What a wise provision of nature, that an ingredient in almost every soil should be able so tenaciously to retain the substance indispensable to vegetation, ammonia, which is poured down in every shower of rain, exists in every flake of snow. The plants have the power to extract it from its combination with humus then just as they want it, and the rich manure of snow water is no longer a fable; for the ammonia is retained in the snow by the coldness of the temperature, until the genial warmth of spring sets it free to promote the growth and vigor of the young year. One of the most valuable ingredients, therefore, of guano is the ammonia, or rather the ammoniacal salts, and by the quantity of these its price in Europe is very much regulated. The best Peruvian guano contains thirty to thirty-eight per cent. of these salts, some from Chili is quite inferior and only contains eight to twelve per cent.; the best Ichaboe from twenty to twenty-seven per cent., the cargo of the Samos, just arrived from Ichaboe contains 26¼ per cent., and is a very superior parcel. It has been stated by Dr. Davy that he was unsuccessful in finding uric acid in the African guano; I have found it, and I see by recent analyses from England, that it has been found in many parcels to the amount of 1½ per cent. This is by no means an extraordinary circumstance; this substance and its immediate combinations are rapidly and easily transformed, naturally when moistened, or during the process of analysis, into carbonate of ammonia, &c. The character of Dr. Davy as a chemist forbids any other supposition, than that in the samples he analyzed, this transformation had taken place previous to their being placed in his hands.

The latest discovery respecting this portion of guano, is by a German chemist, Unger, who has found in it that exceedingly rare substance, the *Xanthic oxide* of Marcet, hitherto only found in very small quantity in urinary calculi. This, although of no agricultural importance, is extremely interesting to chemists and physiologists.

The next to be considered are the fixed or permanent ingredients. These may again be divided into two kinds, those soluble, and those insoluble, or nearly so, in water.

Those soluble in water are chiefly salts of potash, as phosphate, muriate, and sulphate of potash. I trust that agricultural chemistry is so generally understood now, as to make it unnecessary for me to discuss here the value of potash to the farmer; he knows that this or soda exists in every manure. In the quantities of these ingredients there does not seem to be much difference in the Peruvian and best African, there is usually from ten to fifteen per cent., more than this I think would hardly be advantageous. By this division of ingredients the farmer may know what he adds to his soil in using a solution of guano in water. Such solutions should never be stronger than one pound of guano to twenty gallons of water, and may be used where convenient three or four times during the *growing*, not the *ripening* season.

We now come to the last division of ingredients, those insoluble in water, or nearly so.

They consist chiefly of the phosphate of lime and of magnesia, and the oxalate of lime. These substances, although insoluble in plain water, are soluble in many of the liquids and compounds they meet with in the soil, and when in contact with the roots of plants. They are of the greatest importance to vegetation, for two of them are contained in the seeds of all cereal grains, and particularly in the embryo plant or plumule of the seed. They are contained in exceedingly small quantity in the usual manures, and hence the fields in England which have been so severely taxed for them by the incessant taking off of wheat crops, could yield them no longer until replenished by bone manure or phosphate of lime. The quantity of these in guano varies much, say from 20 to 40 per cent.: about 30 per cent. is a good quantity. Beside these ingredients, there is generally moisture or water varying from 10 to 30 per cent. On this subject it seems only necessary for me to say, that the less water the better, not only because it is the least valuable ingredient, but because water rapidly decomposes the ammoniacal compounds.

The intelligent farmer, from knowing the quantity and quality of the ingredients of his manure, will be better able to shape his course in the application of them, a subject on which of course much experience is still desirable with guano. I have written strongly to Mr. Colman to send us over all the information he can collect on the subject, and I have not the least doubt of its being placed before our farmers in his work, in sufficient time to direct their spring operations.

From what has been said, then, it appears that if a growth of stem, leaf, and root, be required, the solution of guano is about as useful as the whole substance; but where a seed crop is wanted, the insoluble ingredients above are requisite, and the whole guano is necessary. Several experiments have been made here on grass-lands, after the first mowing; they have not been very successful, and the reason is obvious. The guano has been spread over the grass, and in cases where it has not rained immediately, the ammonia has evaporated in the air; and even in cases where rain has followed, much of the ammonia must have evaporated before the solution could get through the thick matted stems to the roots. The potash and other fixed salts may, however, probably be of use in the ensuing spring, but hardly sufficient to warrant any expensive outlay. Permit me here to observe to the farmer, that an unsuccessful experiment, well conducted, is often as instructive as a successful one, and therefore may equally lead to profit. The seed corn which I grew with guano last year has been tried against the best that could be purchased of the same kind, and under precisely the same circumstances, side by side; the guanoed corn was strikingly more luxuriant, and yielded the largest crop.

The whole result of my experiments this year, has, if possible, strengthened my estimation of the valuable power of guano, and my view of its application generally, is, that 250 to 300 pounds is sufficient for one acre broad cast; that it should be put into barrels and be kept as close as possible; that when applied, no time should be lost in covering it with the soil, so that when the ammonia escapes it may at once impregnate the soil above it, which will then gradually give it off to the plant.

Pumpkins of enormous size grown with guano, have been exhibited this year, at the Massachusetts Horticultural Society, and many of those who have tried it on various vegetables, are full of wonder at its power. I think it not so likely to answer so well in stiff clay as on light soils; but one of the great objects of the farmer ought to be to lighten his stiff soil with sand, and then it may be used. On grape vines and all gross feeders its effects are surprising. On fruit trees, one conspicuous action is, that it shortens the joints between the leaves, making the growth short, stumpy, and therefore productive. As it excites vegetation at any time of the year when the atmosphere is of a temperature to permit growth, it must not be applied except during the growing season; but for forcing fruits or flowers, out of season, it will be very serviceable. I have heard from several here, that its effects on potatoes have been remarkable; but I can say nothing on this subject from my own experience. I think the African guano generally, is not so retentive of the ammonia as the Peruvian, nor does it usually contain quite as much; but the difference of price amply makes good this difference if skilfully and carefully used.

J. E. Teschemacher.

Boston, 1st October, 1844.

GAMA AND BERMUDA GRASS.

With great trouble, and at some expense, I procured five acres of Gama grass, which I found neither horses nor cattle would eat, and I consider it as utterly worthless. The Bermuda grass is the best for pasture in the world. It is the doub grass of Central India, and among other things was brought to Georgia by Governor Ellis. You will find it figured and described in vol. v. of Sir William Jones' works, London, octavo edition. It was carried to the Bahamas, from Savannah, by Col. Tatnall, and I suppose found its way to Cuba with the cattle traders of that island. The Hindoos worship this grass as the best food for the sacred bull, and as being sent down from India by Brama for his use.

I speak very positively of the Bermuda grass, being the doub grass of India, and I do so because Mr. William H. Crawford, when secretary of the treasury, procured from India this grass, and tne acorns of the teack tree, and sent me. I was struck (although a dry specimen) with the identity, and having Sir William Jones' work, in which this grass was figured, and my yard and lawn filled with it in flower, I compared them, and found they perfectly accorded in all points. But it requires a microscope to discover the beauties, which he (Sir William Jones) so rapturously describes, in its flowers. I do not know whether I stated that the Marquis of Hastings introduced this grass into England, but it failed, as Loudon states, from choosing an improper situation for it. It would grow well in your lands, that are warm, moist, and not flooded; water lying on it beyond a day destroys it; the roots penetrate too deep to be destroyed in a good and warm soil. Its grazing powers exceed credibility in proper situations; nor is there any grass equal in quality for horses, cattle, or sheep. Thos. Spalding.

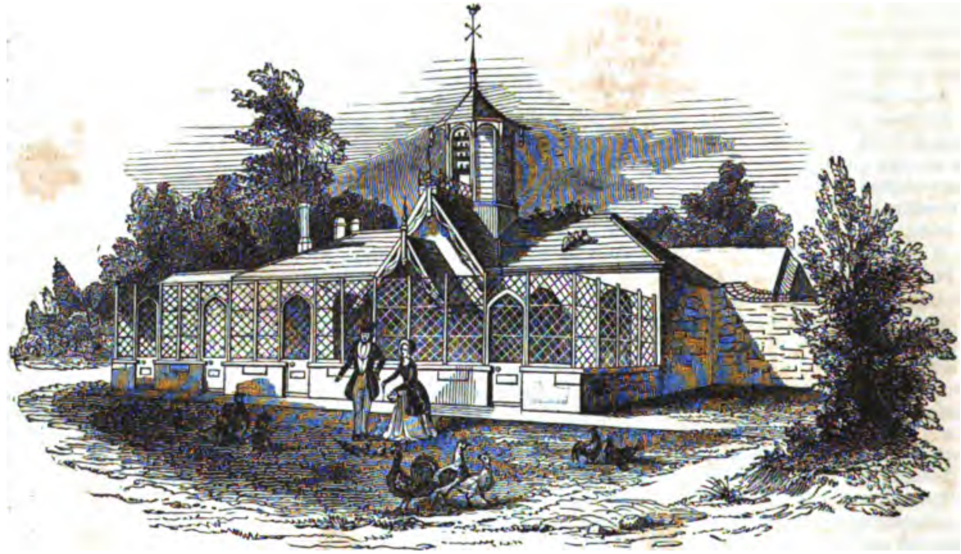
Sapelo Island, Geo., Sept. 24, 1844.

In addition to the above from Mr. Spalding, we have had a communication for some time on hand from Mr. Affleck, of Mississippi, who also forwarded us specimens of the Bermuda grass. We also recollect seeing it growing on his lawn and in other parts of the south. He says:

I find by actual experiment, weighing the Bermuda grass newly cut, and the same when dry, that it loses exactly 50 per cent., or 100 lbs. of grass make 50 lbs. of perfectly dry hay. It is the hardest grass to cut, however, that I have ever seen tried, and the easiest cured. I house all at night, which has been cut at noon. It would not, in my opinion, bear the cold of your winters—the first frost kills it to the ground. The Muskete, or as Kendall calls it, *Mesquit* grass, I presume would suit your climate better. It is yet a mooted question whether the Bermuda ripens its seed in this latitude. I will examine it carefully this season, and if I find matured seed, will send you some. I know not where Mesquit grass can be obtained. I send you three samples of Bermuda—one of long grass, of upright growth from the meadow, just coming in blossom—the other from an upland pasture—and the third, a stalk that I pulled off the surface of the ground, to show you how it spread, and how admirably it is adapted for embankments. On a piece of good meadow land, this grass stands in a solid mat—so close are the stalks, and so thickly interwoven are the leaves, that when cut with the scythe it very frequently stands erect. I feel very confident that it is *the most highly nutritious grass known to us.* From the specimens I send you, you will readily understand how such enormous crops of hay are cut from meadows of this grass—observe the great solidity and weight of the stem. In curing, it loses less weight than any grass I ever saw—and affords three cuttings, yielding an aggregate of from five to eight tons of hay, from a moderately good meadow.

I have said enough, however, to convince any planter who wishes to form pastures for his almost starved stock, or to do away with the necessity of pulling fodder, work so destructive to the health of his negroes, that he ought at least to make the experiment. And as a proof that I am willing to aid in spreading this treasure over the naked hills of the south, I will willingly forward to any planter, *who is a subscriber to two agricultural journals, one of which is published in the state in which he resides,* on his applying to me *post-paid,* a barrel of roots of this grass, which would, in one season, cover a large extent of ground. To the river planter it is absolutely invaluable—there is not a levee on the banks of the Mississippi could resist, for one hour, the pressure and attrition of the fearful flood now rolling along, but for their being bound together by this grass.

A POULTRY HOUSE.—Fig.62.

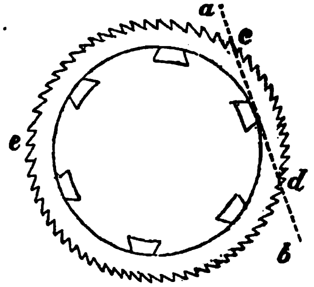


The above cut of a Fowl-House adorns the title page of Mr. Bement's Poulterer's Companion. It is copied from that at Windsor, belonging to Queen Victoria and is thus described by the London Pictorial Times.

It is a semi-gothic building, of simple and appropriate beauty. It consists of a centre pavilion, used for inspecting the fowls, crowned on the top by an elegant dove-cote, and on the sides, of wings capable of symmetric extension, in which are placed the model roosting-houses, and laying and breeding nests of the fowls. The ground, in front, slopes toward the Park, and is enclosed and divided, by light wire fences, into separate wards, for the run, or daily exercise of the birds. Inside these wards, gravel-walks, bordered by grass plots, lead to the entrances of the fowl-house. In the proportions, distributions, and fittings of the apartments of this house, considerable knowledge of the habits, with a corresponding and most commendable regard to the conveniences of their granivorous tenants, has been displayed; the chambers are spacious, airy, and of an equal and rather warm temperature, which accords with their original habits, and their nests are made as far as possible to resemble the dark bramble-covered recesses of their original jungles. In this particular, Queen Victoria has set a good example to the farmers, who too often follow the false routine of their fathers, rather than consult the habits and obey the natural instincts of the animals about them.

THE COTTON GIN.

It has seemed to me easy of solution that our cotton gin could be improved, so as to do, perhaps, more work, and to make better cotton, either of which would be an improvement. I know not that I can give you or your readers sufficient light to understand me, but if you will cast your eye to the diagram, and bear with me, I will attempt it.



Saw-Plate Circle.—Fig. 63.

This diagram I have drawn, to show how the teeth of the saws enter the cotton as well as how they leave it, and should pass out from the grate; *a b* is a grate—the circle is a saw plate, all of which within the inner circle has been cut out except at some few places along where it is fitted on to a cylinder of wood; *d* is a tooth entering the cotton, and *c* is a tooth leaving the grate. The circle in the saw plate is 14 inches. The teeth are laid off with front edge, on a line with a tangent, to a circle of 19 inches. The cotton is placed in the front part of the gin stand, through which the saw runs, and from its force, being turned by a drum on one end of the cylinder, it turns the cotton in an opposite direction, of course, the tooth is more or less forced in; but the main force is not brought to bear until the tooth is about quitting the cotton at the grate *c*, between two of these each saw passes, and then pulls off the lint known in common as cotton. If this tooth should pass through the grates in going out, for it passes at *c*, with the point entering first, of course the cotton would be forced into the notch, and if the heel should enter first, no lint would be pulled off. The fact that many saw teeth are so shaped, and grates so fixed, that the tooth in leaving the box where the cotton is, passes through the grates point foremost, is why we have the nap, or curl, or twist, in cotton to a great extent; another cause is dampness of the cotton, it is forced from the seed and being compressed in the tooth, the brush does not blow it to pieces; another reason, the brush has not velocity sufficient. To remedy these, alter the shape of the teeth, or grates, or the setting on of the latter, dry cotton, or give more velocity to the brush.

To increase the quantity of ginned cotton, we would have to increase the speed; but if we do so, that velocity alone will tend to force the fibre into the heel of the tooth, and in drawing it from the seed to break; or in the quantity drawn off, to cut against the sides of the grates. My notion is then, to increase the size of the saw plate to 12 or 16 inches, or even more; I would, if I were able, experiment up to 24 inches; increase the number of teeth to 8 to 12 to the inch, give the brush velocity, this depending much on the form and number of arms you give the brush. My brush you will see from actual measurement evolves near six times to once of the saw, it having six arms and small; but I should have the brush much longer than the saw plate, and have the bristles long and stiff, placed to the edge of a thin board fastened to arms, say four to six inches wide; the power of making a current of air to blow the cotton entirely loose from any compactness formed by the saw tooth as well as to clear the saws perfectly, is what we want. I should have seed and motes to be dropped, separate of course, but in front, with no air to be admitted to the brush, except at each end of the same; thus the motes could not be blown with cotton, and a more controlling blast of air kept directly to act on the lint.

All gudgeons should work in boxes made to contain oil continually; and whether gearing by cogs or bands is best, should direct me whether to give motion to the brush by a band, or with cogs.

I give you now the measurement of my old-fashioned gin-stand:

The saw plate measures in circumference	28	inch.
driver on the end,	30¼	"
drum that gives motion to the brush,	50¼	"
" of the brush,	8¾	"
number of teeth in the saw plate,	124	

In giving the above, I remark here, that I made the drum that carries the brush band on the saw cylinder, larger by two inches in diameter, and reduced that on the brush full quarter of an inch, thus gave the brush over one evolution more than when it came from the ginwright. When the brush has not velocity and power enough, the cotton will not be cleared directly from the saw teeth, and will be retained on the bristles. My addition is roughly done, but I save throwing back the ginned cotton in lint room nearly a half, the cotton being blown so much farther.

Allow me to repeat in a kind of summary what I would have in a gin-stand, and assure you such a one I have not seen. I gave my opinion thus a year ago, and before such a one was known to any of us about here. I would have the saw plate some 12 to 16 inches in diameter, the number of teeth to the inch 8 to 12, the teeth straight on the front edge, filed rounding, not square, or inclined, as is done with rip or cross cut saws, and *never sharpened* after. The grates straight, and placed so as to correspond with teeth of the saw, which should strike the line of grates on leaving them perfectly parallel, at no angle. The brush to have velocity enough to cause the greatest current of air, and should be 18 to 24 inches in diameter. The motion of the brush to be given by bands or cogs as it may be known by machinists to be best—air admitted to the brush at each end. I would have one set of false grates only, merely to more effectually cut off access of air from below or front to the brush, but not very close where the teeth of the saw pass through them.

My running gear is cast segments on a 12-foot wooden wheel, with a cast spur head on the axle of band wheel, with 228 cogs in the main wheel, and 21 in the spur head, the band wheel being 5½ feet. The driver, or drum, or whirl, on the saw cylinder being 30½ inches in circumference, or 10 inches, about, in diameter, will give data to calculate the velocity of saws. My reason for advancing this idea of a gin stand arises from some two or three little trials. I have ginned cotton on McIntyre's patent spinning machine, and sent to Vicksburgh and New Orleans with samples of my gin's performance, and found the former did command from one to two cents more in the market, I therefore concluded if we could have a gin with fine teeth, that we might secure this advantage; but we would lose in quantity—to make this up, I looked to size in the saw plate.

I should remark here, that a long band, with an idler to support the lower part of the band so as to hug the drum more, would make the running of the gin lighter to the horses. What size this idler should be, I know not, but think four to six inches diameter would be large enough. I have heard tell of one being made by a man, who *called* himself a mechanic, of some two to three feet; his object was to give more velocity to saws. What a mechanic! I suppose an idler of four inches would run lighter than one of two or four feet, and therefore than one 8 to 12 inches, and probably enough to notice.

I have been particular and minute that I may aid the beginner.

Gin Bands.—I am not very sure, but what leather bands are the cheapest in the end. My present band has been in use nine years, the weight and cost of each are given to show what is the difference of present value, then the difference between the wear of two years and very probably full fifteen to twenty will show the difference in the end, which is the only mode for a farmer to calculate.

My band weighs 15 lbs. which at 37½ cts. per lb. cost.	$5 62½
It measures 42 feet long, it will therefore take two thirds of 14 yds. at 14 cts.,	1 31
The leather band will last 15 to 20 years, say 15 years, per year,	37
The band will last 3 years at most,	43

When the leather band is 15 years old it is worth nearly half price, for strings, &c., whereas the cotton band is not worth anything. But there is another way to look at it, the use of that much cotton is something in creating more demand, with less demand for leather.

It may not be a wise policy to invite attention to improving gin stands, it might hasten on to a change in the affairs of the world. Should the ingenuity of man once succeed so as to combine on a large scale the ginning, carding, spinning, and weaving into one operation, by which the large planter could turn out his cloth with as much ease as the pin-maker makes and sticks his pins, when compared with twenty-five to fifty years ago, it will cause a greater revolution than did Arkwright, with his power looms. What a change! And yet it may be done in less time than we can anticipate.

M. W. Philips.

Log Hall, Miss., Sept. 6, 1844.

THE POLICY OF AMERICAN FARMERS.—No. I

If the farmers of the United States are ever to reap the full benefit of their labor, they must do something beyond raising the largest amount of products, at the least amount of expense. An enlarged and comprehensive view of our circumstances and commerce as a nation, and its internal and foreign relations, and a general, systematic, and concerted action, on the part of the agricultural interests, founded upon such information, is indispensable to their realizing all the advantages to which they are entitled. We see this intelligent and embodied effort in every other profession and craft; the clergy, acting through regular and frequent assemblies, for the more effectual promotion of their benevolent objects; the physicians, associating for the protection of their profession under law, and securing to it the highest amount of intelligence; the lawyers, in controlling legislation so as to secure to the profession the largest bill of fees; the mercantile and commercial interests, by their boards of commerce and other active and well-remunerated agents, influencing national laws and commercial regulations for their own benefit; the manufacturing and mechanical interests, by concerted movements, effecting the same objects for their own pursuits; and even the laboring classes, by the well-drilled and efficient *strikes*, not unfrequently compelling an attention to their own interests, beyond their intrinsic merits. The farmers, it is true, are well, indeed amply, protected by an impost on the objects of cultivation in this country sufficient to exclude every article they are now engaged in producing. The staple productions, grain, vegetables, beef, pork, cotton, &c., have always been fully protected, and by the late tariff the duties have been so increased on wool, hemp, silk, and some other products, to which Americans have been recently turning an increased attention, that they can now defy competition from abroad. It is not the want of higher duties on their crops, which they now require; it is a well-organized, efficient, intelligent, central board, supported by funds from the general government, which, procuring information from every portion of our wide-spread union, and from every foreign nation, with which we can have any profitable traffic, will be enabled to suggest new and profitable objects of cultivation; give additional value to such as are already receiving attention, and mature and communicate for acceptance, such modifications of adopted systems, as the constantly varying circumstances of the country require. Such a board was recommended by the illustrious Washington, in his last message to Congress, Dec. 7, 1796, and had his wise counsel been at that time adopted, and efficiently carried out to the present time, we might confidently have looked for a success and intelligence in American agriculture, far beyond anything that the world can now exhibit.

That the creation of such a board, is at any time within the power of our landed interests, is clearly manifested in the fact, that every officer of our government, legislative or executive, is either directly or indirectly elected by the popular vote, and at least two thirds of this vote is given by those whose entire support is derived from agriculture, and one half of the remaining third is under their controlling influence, so that not less than five sixths of the popular voice can be brought to bear in favor of any measure calculated to promote this object. The neglect, hitherto, to secure the rightful interests of this great pursuit, evinces an apathy and indifference, alike discreditable to the intelligence and patriotism of the agricultural community. R.

MERINO SHEEP.

Having of late taken much interest in the growth of wool, and incidentally in the best breed of sheep for that purpose, I have concluded from all that I can learn of the present flockmasters of the country, the prices of wool, and the condition of our American lands for wool-growing, that the original Spanish sheep, of the importations from 1802 to 1815, are the best for the general farmer, and particularly for my own purposes. Many years since, I was interested in the sheep of some of those importations, and I well recollect their fine, substantial forms; their well-covered bodies; and the beautiful and uniform fleeces which they annually yielded. But, so far as I can understand, those animals have many years ago passed away in the drooping interest that our people have suffered in the production of valuable wools; and more than that, in the impatient, fidgety, and uneasy propensity of the American character to change and cross everything of the animal kind which they possess, and the proverbial disposition we have of not "letting well enough alone."

The upshot of all this is, that the ancient flocks of our Merinos (by ancient, I mean from 25 to 40 years ago), have been Saxonized by the numerous flocks imported in the years 1825, '6, and '7, principally on speculation. Indeed, these animals, vastly inferior, in my estimation, for the interest of the American wool-grower, to the Spanish sheep, were greedily, and without due deliberation, seized upon by our breeders to improve them. The result has been, an absolute deterioration of their flocks, in constitution, size, and weight of fleece, and as I too much fear, the *almost* extinction of the true descendants of the old Spanish sheep from our country. At all events, I have examined several flocks the past season, and among them all I seldom recognised anything that came up to the splendid old originals of the early Spanish sheep imported by Livingston and Humphrey in early days, and afterward in many select flocks, by several other distinguished sheep-fanciers and breeders of that day. There was a charter of nobility in their look; a cavalier measure in their tread; and the dignity of an old Spanish don in their presence, which outmeasured anything now seen, except occasionally, among the so-styled Merino flocks of the country. This deterioration is admitted by all with whom I have conversed, to be caused by the promiscuous breeding in of the Saxons with the Merinos. In corroboration of this sentiment, I have also the opinions of some of the largest wool merchants of the northern and eastern cities, who unequivocally declare, that the qualities of our wool have gradually been changing from the fine, close, yellow fleece of the Spanish Merino, into the texture of the less hardy, yet finer and whiter, Saxon.

I have for some months been much interested in a sort of controversy which has been carried on in your paper regarding the merits of some sheep, described as being bred in Vermont, and said by their breeders to be pure Paular Merinos. These animals also have gained much notoriety in the columns of some of our agricultural papers, where they have been figured, not at all to their credit, nor as proof, (if the pictures be correct likenesses,) in my opinion, of the purity of their blood, as either Paulars, or as pure specimens of the Spanish Merino at all. How this may be, however, I will not pretend to say. *Per contra* to this are the caustic, and, as I think, unnecessarily severe strictures of Examiner in the Agriculturist. So far as the *facts* of Examiner are concerned, my own evidence of the present condition of fine-wooled sheep in America corroborates them; but his personalities can have little bearing on the *real* argument as to the existence of, or purity of blood of our fine-wooled sheep generally.

In regard to the existence of the *Paular*, as a distinctive variety of the Spanish sheep, in the United States, I infer that they are a *fancy* breed now existing only in the imagination of their proprietors; for, so far as I have been able to ascertain, but very few of that valuable variety ever were imported into America at all; and the inveterate propensity of the "universal Yankee nation" to intermix everything of the animal kind, could hardly have left these to escape the usual fate of all things else. I also believe this from the statements of very many highly creditable individuals in different parts of the Union, who have much experience in sheep-breeding, and an intimate knowledge of the principal flocks throughout the country.

Mr. Jarvis, of Vermont, who probably imported more Spanish sheep than any other single individual in the United States, declares in his essay last winter, published in the Boston Cultivator, that his own flock, although kept separate in their varieties for a long time, were all mixed some years ago, and since then he has bred them indiscriminately. It is also asserted by those who have abundant opportunity to know from personal observation, and by wool-dealers, who have purchased his wool, that the Saxon blood has prevailed to a great extent among his flock of late years. So also of most, indeed, perhaps, every other *large* flock in the United States. Now and then, select small flocks may possibly be found, few and far between, the relics of some well-cared-for, and choice animals which have not been intermixed with Saxon or other blood. Yet it may in truth be said, if we are to believe the disinterested testimony of the great body of wool growers throughout the United States, no candid mind can rely upon obtaining pure, unalloyed Spanish sheep in any considerable numbers.

It appears to me, that the persons who have recommended their animals to public attention through the agricultural press as pure Merinos, and the blood of which has been impeached, should, in justice to themselves, substantiate their pedigrees by unimpeachable evidence. In pursuing this course, imposition may be avoided, and the public confidence restored in such individuals as now stand by public accusation in the unenviable position of selling spurious animals under false names; and as both myself and many of my friends require thoroughbred Spanish rams for the restoration of our flocks, it is not to be doubted that such animals, if existing in the United States, will meet with ready encouragement from systematic wool-growers.

As to the Rambouillet sheep of Mr. Collins, I have seen only one or two specimens of his flock. The staple of their wool is remarkably nice, and shows all the fine, silky, softness and length of the most approved Merino of "the olden time." Yet as these are so few in number, I understand that no more of his sheep are for sale at present; my own and the applications of others being refused at any price, they do not appear likely to supply the public demand, at all events, for some time to come. L. F. ALLEN.

Black Rock, October, 1844.

SORREL AND SOUR SOILS.

I AM obliged to Acetocella for his criticism on my article relative to sorrel, as it is probable I may be in error according to modern chemical records. When taking lectures some forty years ago, I was engaged for nearly two years in a laboratory making experiments, and among the articles tested was the juice of sorrel, in which we detected lime, and as we had to supply potash to make the binoxalate, I marked the juice in my notes as an oxalate of lime. I can not now remember whether the sorrel we used was the acetosa, or the acetocella.

Granting the juice of sorrel to be a binoxalate of potash, the adding lime to prevent its growth would be just as absurd as if it were oxalate of lime; inasmuch as lime can not displace potash from any of its acid combinations, having a much weaker affinity for acids than potash. The most probable remedy would be sulphate of lime; or if this did not answer, a very weak solution of sulphuric acid, this acid having a much stronger affinity for potash than the oxalic.

WM. PARTRIDGE.

DOGS AND CATS.

I SUFFER great loss in two kinds of stock here, which, if not of as great value as Durham cattle, are yet even more indispensably useful—I mean in *dogs and cats!* During the two years and a half that I have resided here, we have not been able to keep a single cat; they have all died in convulsions, and all in the same singular manner. They are attacked with violent shivering, seem in great agony, mewing and struggling, each fit becoming more and more violent, until they die. Can you or any of your correspondents give us the cause and remedy. (*a*) I have been told that *bleeding*, by cutting off a piece of the tail each time they have a fit, will ultimately cure them. I am now trying it, *economizing the tail* as much as possible, that it may get a fair trial. So far the kittens have recovered, when thus treated. Some other cure would be preferable, as a *bobtailed* cat is rather an unsightly object. Still, better even a bobtailed one than none.

I have also lost several valuable dogs within the past year, in somewhat the same way. Two of those I lost were *very valuable* terriers. They begin by going about as if in pain, and evidently not thriving. In a few days they commence with a sharp, keen, constantly reiterated bark, which they keep up, day and night, concealing themselves in some dark corner for a week or so, when they die. Others have dropped down, when apparently in good health, in a violent convulsive fit, having one fit after another, in rapid succession, until they die. I meet with no loss, of this kind, that grieves and annoys me so much as that of a favorite dog, and would be glad to hear of some cure or preventive.

I would say to your correspondent, S. S., that we have had our trees and shrubs almost ruined this year by myriads of a dark brown aphis, yet we have no signs of the yellows.

THOMAS AFFLECK.

Washington, Miss., Oct., 1844.

(*a*) We can not tell the cause of this disease, unless it be an overeating of rats or animal food, but the remedy we have generally found successful, was, to administer pretty strong doses of warm catmint tea. As a preventive, we supply our cats with all the milk they will drink and what vegetable food they will eat, such as bread, potatoes, &c. We also occasionally give them a dish of fresh fish, well cooked, of which they are extremely fond. All animals should have a variety of food when possible to obtain it.

DUTCH AND YANKEE TEAMS.

ALL can not live on canals and railroads. What then is to be done? I spent the last summer and autumn at Venice, in Ohio. The wheat was brought from 40 to 140 miles, in wagons drawn by four, and sometimes six horses. Sixty bushels was not an uncommon load, and a caravan of some ten or twenty wagons were often seen coming in together. The first thing to be attended to on their arrival at the mill was to take the horses from the wagon, unship the feeding trough, bolt it upon the tongue of the wagon, give a few pounds of hay to the horses, which would soon be devoured, then give them water, after which as much chopped feed with cut straw as would satisfy their appetite. Now a fire would be made in the open air, water boiled, coffee made, bread and a cold boiled ham be taken from the wagon, and a frugal but comfortable meal follow. No trouble in procuring either milk or sugar for the coffee. A tea-kettle, coffee-pot, and tin cup, together with a common shoe-knife to slice the bread and ham, constituted all the cooking utensils necessary for the journey. After this was accomplished, they soon turned in under the cover of the wagon, where upon the bags of wheat for a bed, or straw if unloaded, the teamsters have a sweet night's sleep. Arrived at Venice, and the wheat unloaded and payment received for it, they take in a few bushels of ship stuff, sufficient to last to where they have left feed, at suitable distances from home, to carry them through the *entire* journey each way, so that the whole expense of the journey is the feed at the mill, and perhaps a little hay and cut straw purchased on the road.

I will now contrast this with another section of wheat-growing country, lying within a circle of 30 miles of the canal or railroad depot. The farmer puts up his 30 bushels of wheat, hitches on his two hundred dollar span of horses, takes his two dollar mounted whip, gives it a *crack*, and away he goes to the half-way house; stops, orders a bating of hay for his horses, 6 cents; 8 quarts of oats, 25 cents; dinner, 31 cents, and 6 cents to the hostler for his attention. Arriving at the mill, he takes the horses from the wagon to the tavern, orders supper, lodging, and breakfast. The whole, together with horse-keeping, &c., &c., $1 56. Perhaps he may drive home on 31 cents for horse-feed and creature comforts; say in all $2 expense out of 30 bushels wheat. I have said nothing of the difference in cost of the clothes of these two farmers; the former consisting of what they call jeans, made in the family, of cotton and wool, and costing not to exceed $4 for the dress throughout, hat, boots, and all. The latter costing $40 at least, including great coats and umbrella, and very cheap too. The one farm has cost, with all buildings complete, say $6 per acre; while the other has cost $50 per acre. The former is out of debt, and lays aside his money, or loans it on interest; the latter has hard work to pay his interest money, after meeting all family expenses. Take courage, then, my distant and inland readers, and envy not your neighbors who live, as you may erroneously suppose, in the enjoyment of superior advantages.

A BUCKEYE.

COSTLY FENCES.

THESE are all very well where fencing material abounds, and the owner can afford to build at an expense of 75 to 150 cents per rod. No single rule of building or description of fence will answer for all localities. Every farmer must consult his own convenience and interest in the matter. I think people in general have too great a *penchant* for small enclosures. These should be proportioned to the size of the farm. In stony countries, solid wall is no doubt the best; in wooden ones, the worm or Virginia fence is altogether the best and cheapest. (*a*) I have lately made a contract for some two miles of this, to be eight rails high, and double locked at each corner, for about 30 cents per rod in length. It takes up some six feet of ground in width, it is true, but in cheap land that is no object. The rails will last 20 to 50 years, and if they get infested with bushes, it is but little labor to take them up and set them a few feet distant on another line. White oak, red and white cedar, red, black, and gray oaks, chesnut, hickory, the varieties of ash, basswood, elm, &c., &c., in fact, anything that will split, makes good fence; but a block of durable wood, some six inches thick, should be laid under the ground end of each bottom rail.

PUTNAM.

(*a*) The "best and cheapest" fences are, with few exceptions, *none* at all. They are not only an eyesore in the landscape, but a perfect curse to the country, and the most unnecessary and outrageous tax on their industry that a people ever voluntarily submitted to. This language may appear strange to many of our readers, but we intend to take up this subject in our next volume, and hope to show the enormous absurdity and waste of labor in fencing in farms, especially in a country like the broad prairies of the west, which seems to have been made by Omnipotence expressly to be cultivated without them.

FINE CATTLE FOR THE SOUTH.

As the importers of fine cattle in the south often lose them by sudden death, and having had considerable experience in transporting them there, I have thought it might be useful, for me to give some hints on the subject for your paper. It is very important to the breeders of the south that they should adopt the custom of selecting young cattle instead of old ones, and they are often injured by high feeding. I would say from one to two years old were the best ages for importation. Ship in the fall not earlier than the first of October. They should have as near the same course of treatment after their arrival at the south as they had been in the habit of receiving at home. Good hay with corn and oats ground, or separate in moderate quantities, bran, or shorts mixed with cut straw and roots, if convenient. But above all, they should be sheltered from the hot sun, rains, and the night air, and have no grass until fairly acclimated; last, but not least, good water. This course of treatment should be kept up twelve months, after which both they and their progeny may be treated as the good common stock of the country is, and they will live and do well.

R. H. HENDRICKSON.

Middletown, O., Oct. 1, 1844.

HELPS IN READING AGRICULTURAL WORKS.

EVERY one knows the value of a good index, or table of contents, to an agricultural or any other work. Let me suggest another time-saving help, which shall answer the same purpose for a whole life of agricultural reading, that a good index does for a single volume. The object is to facilitate a reference to whatever is of any value in such reading. It consists simply in making an index, as you read of *subjects*. Let any farmer furnish himself with a blank book of one hundred and fifty pages, which will cost three or four shillings, (more or less). Then draw a line across each page, about an inch from the top, and another down each page, about an inch and a half from the left hand side. Then commence with the first page with the alphabet and write A in the space at the left hand, and *a* in the space at the top, in the centre of the page. On the next page write A—*e*, and on the next A *i*, in the same manner, and when the five vowels in A are exhausted, repeat the process with B—B *a*, B *e*, then C *a*, C *e*, and so on to the end of the alphabet, which will take just the one hundred and fifty pages, and six pages to each letter; a page for each vowel. The book can be prepared in an hour easily, and when it is so ruled and lettered, it is always ready for the record.

Now for its use. When reading, and you come to any subject which you wish to examine again, any directions which you wish to recollect, make a minute of it in your blank book, as follows. Write the prominent word, or subject, in the margin at the left hand, and on that page which has the first vowel in the word; thus if it is about apples, on the page A *e*; if about cattle, on the page C *a*, and so on. At the right hand of the word state what you wish about the subject, and *where it is found*. I can not give the idea so well as to quote at random a few pages from my own book, which I think your printers can imitate with common types, spaces, dashes, &c., without any engraving, and which shows the form of the book and the manner of its use, at a glance.

A	*a*
Asparagus.	how cultivated: Am. Ag. vol. ii. p. 6, vol. iii.
"	" " p. 70. Farm. Mo. Vis. vol. iii. p.
"	125.
"	" " New Gen. Farm. vol. ii. p.
"	106, vol. iii. p. 123.

A	*e* New page.
Apples.	good kinds: West. Farm. vol. ii. pp. 10, 175,
"	196, 206.
"	" " New Gen. Farm. vol. i. pp. 82,
"	103, 180, vol. ii. pp. 51, 178.
"	" " Am. Agricul. vol. i. p. 324,
"	vol. iii. p. 120.
"	value for stock: N. Gen. Farm. vol. i. p. 18.
"	vol. v. p. 35.
"	winter keep: Am. Agricul. vol. ii. p. 193.
Apple	how made: New Gen. Farmer, vol. 2.
Molasses.	p. 27.
Ashes.	value for manure: Monthly Vis. vol. iv. pp.
"	79, 173, 187.
"	" " N. Gen. Farm. vol. ii. p.
"	93, vol. iii. pp. 158, 164.
"	" " Am. Ag. vol. i, p. 324.

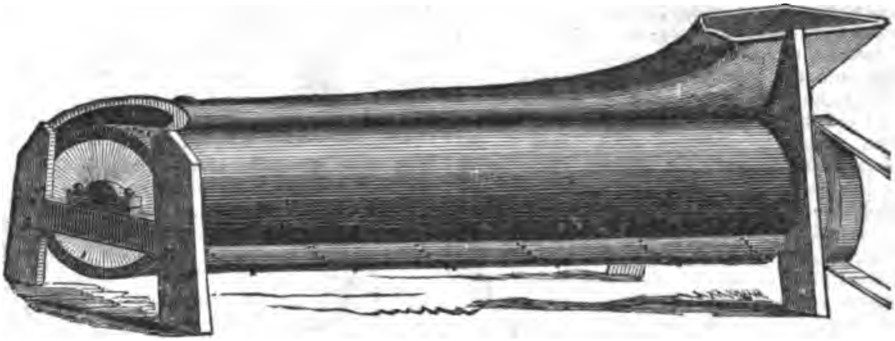
C	*e* New page.
Charcoal.	nutritive: Am. Ag. vol. i. p. 181, vol. iii.
"	pp. 108, 125.
"	" N. Gen. Farm. vol. v. pp. 33, 41.
Cattle.	diseases of: Complete Farm. pp. 66—71.
"	" " West. Farm. vol. ii. p. 248.
"	" " N. Gen. Farm. vol. i. pp. 68,
"	85, vol. iii. pp. 49, 84.
"	native, value of: N. Gen. Farm. vol. iii. pp.
"	2, 18. Am. Ag. vol. i. p.
"	328.
"	short horns: Am. Ag. (too many to quote.)
"	Devons: Am. Agricul. vol. iii. p. 10.
"	Hereford: " " vol. ii. p. 106.
Calves.	treatment of: Am. Ag. vol. i. pp. 84, 362.
"	vol. iii. p. 40.
"	" Complete Farmer, pp. 54—61.
"	" N. Gen. Farm. vol. i. pp. 68, 85,
"	" 99. vol. iii. p. 49.
Cranberries.	how raised: N. Gen. Farm. vol. iii. p. 45.
"	" " Am. Ag. vol. i. p. 28, vol. iii.
"	pp. 54, 79.
Carrots,	white, for cattle: Am. Ag. vol. i. p. 343.
"	" " " N. Gen. Farm. vol. iii. p.
"	77.

Thus I have quoted a part of three pages, from which the plan can be seen. Thus if you want to make a minute of corn, cows, clover, cooking food, crops, &c., use page C *o*; if of flax, fallow, farm buildings, the page F *a*; if of horses, hoof, ail, horn ail, hot beds, hops, horse power, &c., the page H *o*. Thus it will be seen, that you have only to turn to the page of the book where the subject is noted, and you can refer at once, and without loss of time, to any volume of any work you have read on the subject, and thus save a great deal of time in looking over the contents and through the pages of each volume. I made my book from the necessity of the case, it took so much time to look up the information I wanted. I have no doubt lost a valuable cow, from not being able at once to turn to the treatment of diseases. Now I can find any one I have read in two minutes. And so of all other subjects. Five minutes is amply supply sufficient to note down the contents of each number of any agricultural paper, and then you have the same facilities to refer to your whole agricultural reading, that you have for any single volume, when your editor sends you, at the end, a complete index. Of course it is assumed in this, that your different volumes are preserved, bound or stitched, and kept with your reference book where they can easily be taken up. Of course, also, it is supposed a farmer must have a pen and ink handy. If he has to send to the barn-yard to pull a quill from the wing of a goose, and pour some vinegar into an old ink bottle, to make something that will mark, and use his razor to make a pen, (all of which I saw recently, at the house of a large farmer, or of a man with a large farm), it may not be a time-saving operation. This caution, however, is needless without doubt; for a man who does this never takes an agricultural paper, probably, and has no need of reference, and nothing to refer to if he had. But for a man who wants to save time and money, a mere trifle of cost, and a few minutes spent *as soon as the paper or book is read*, it will be found very valuable. The more one reads, the more valuable it will be. It brings the whole under the eye at once, just as a merchant, who keeps his books well posted up, can tell in a moment how each man's account stands. But if you do not have anything ready and make the entries at once, your reading will leave you like the merchant who should have to look through his day book (keeping no ledger) to find any man's account. It would be a time-wasting, and not a time-saving operation. H.

Ohio, August 5, 1844.

The plan of the above work suggested by our correspondent, is like Todd's *Index Rerum*, which we have made use of for several years. It is ruled and bound with the alphabetical letters printed on the top of each page. We can attest to its great value as an index for general reference, and are highly obliged to our correspondent for bringing the subject before the public for the benefit of the farmer. Such an index is as valuable to him as to the student of general literature, and perhaps even more so, as he has not like him large and well-selected libraries, at hand for constant reference.

A CORN-SHELLER.—Fig. 64.



This machine, Smith's Power Corn-Sheller and Separator, consists of a horizontal toothed cylinder six feet long, and one foot two inches in diameter. The ears of corn, in the operation, are confined to a part of the upper and rising side of this cylinder, by means of a cast iron concave extending the whole length of the machine, and being shoveled or let in the machine at one end, they are driven through, and the cobs discharged at the opposite end, while the grain falls below, being admitted on either side of the cylinder. The operation is governed by elevating or depressing the discharge end, which causes the machine to discharge the cobs fast or slow, and of course operates more or less upon them; thus securing to the operator the power of finishing his work.

This machine is capable of shelling three hundred bushels of ears per hour.

F. N. Smith, *Patentee.*
New York, Oct. 1844.

TUSSAC GRASS.

The introduction of tussac grass in Great Britain has been deemed of so much interest there, as to have enlisted the efforts of some of the high officers of government for that purpose. In a recent No. of The Transactions of the Highland and Agricultural Society of Scotland, I noticed a communication to the society from Lord Stanley, secretary of state for the colonies, enclosing a letter from Governor Moody of the Falkland Islands, where the grass is produced in great perfection. I give an extract from the letter of the governor:

"I have proved to my own satisfaction, nothing can answer better than the tussac, sown and planted out in rows, the tufts of grass being about six feet from centre to centre. I am resolved to pursue this practice by having a large field laid out at Port William, in order to cut bundles through the winter to fodder horses and cattle in a stable, in the same manner as is done with the Guinea grass in the West Indies. I know that at present it may be cut twice in a year; but under proper cultivation it may be gone over much oftener. It greatly improves by cutting, and grows fast. Horses injure it by grazing, and pigs destroy it. My present experiment tends to show that it will grow on almost any soil, and that it is not necessary for it to be exposed to the spray of the sea, although a width of from 300 to 400 yards along the shore is the place of its natural growth. In some places the extent of the patches appears to be very capricious, the reason of which I can not discover, as it occurs where the soil and other circumstances appear to be uniform. This is particularly illustrated on an island of some elevation in Port Salvador. Although the tussac grass may be cut and amply remunerate the planting in the first year, it seems to take three years from the seed to arrive at perfection; but the tufts bear planting out extremely well. As to how many years the same roots may last, I can offer no information. Decayed portions of the root appear to accumulate; but in a properly attended piece of ground those would be annually removed. Under our present imperfect system, allowing the cattle to roam and graze at will, pulling out, wasting, and trampling as much as they eat, the rough, irregular patches of tussac on Long Island, amounting together to about 150 acres, keep in good fat condition for six months* 250 cattle and 70 horses. Under proper management, it is my opinion the same quantity would be found to maintain three times that number throughout the year. The grass rises high above the snow, is fresh and green all the winter, and from its height, completely shelters the horses and cattle lying among it. Perhaps the best experiment which could be made in England would be to plant tussac in one of the small islands of the Orkneys, such as Hunda, if it met with the approbation of the owner; and I conceive it would be greatly to the advantage of the landed proprietors of the Orkneys and Shetland Islands to send from among them an intelligent person to the Falkland Islands, to study the habits of the grass and to collect seed. He should arrive there early in October."

The Falkland Islands are situated between 51° and 52° south latitude, and nearly parallel with the Straits of Magellan, from which they are distant about 8° east. The climate is therefore very severe. If the tussac be so entirely adapted to that situation, analogy would lead us to expect it would be every way suited to a large extent of our northeastern coast. Their winters being the reverse of ours, it is necessary, as suggested, that one desirous of studying the habits of the grass should be there early in October, the commencement of their spring. The high reputation the tussac has acquired from various visiters to the above islands fully justifies the efforts now making for its introduction into the islands of Great Britain. Six pounds of the seed have been sent there at about $12 50 per lb. It is not improbable that a small quantity might be obtained there through our minister at St. James', Mr. Everett, who takes much interest in agricultural matters; or through Mr. Coleman, our intelligent agricultural representative abroad. (*a*) The object is well worthy the most thorough trial, at any reasonable cost, in our own country. Perhaps some of our enterprising Americans have noticed the tussac abroad, and already tried it at home. If so, they will confer a great benefit on our agricultural community by communicating the results in the columns of some one of the farmers' journals of this country.

---

* The cattle are kept on Long Island only during the winter months.

What is the result of hints on the introduction and cultivation of spurry in the sandy soils of the United States? Has the experiment yet been tried, and what has been the result? Our seedsmen who are so liberally patronized by the farmers, ought to exhibit an enterprising spirit in the introduction of new varieties of seeds whose utility has been proved elsewhere.(*b*)

R. L. ALLEN.

Buffalo, Oct. 10, 1844.

(*a*) We have solicited Mr. Colman, and several other friends in England, to procure us some of this grass seed. The reply is, that it can not be had till larger supplies arrive there. If we find any vessels sailing from this port likely to touch at the Falkland islands, we shall endeavor to get some seed direct. Whale ships might obtain it.

(*b*) Mr. Thorburn imported a small quantity of spurry seed last spring, but we have not yet heard of the result of experiments with it.

LADY BARRINGTON III.

MR. VAIL has just received from the herd of Mr. Thomas Bates, of Kirkleavington, England, another fine Durham cow, called Lady Barrington 3d. She arrived at this port on the 12th ult. We much regret that we were out of town at the time, and did not see her, as she almost immediately left for her owner's residence at Troy, who, we are glad to see, is still willing to be at the expense of importing superior animals from abroad, notwithstanding the dull sales at home. However, in this particular, we expect within a year to see a great change; as the early maturity of the Durhams, and their other good qualities, are attracting marked attention.

Mr. Vail informs us, that Lady Barrington is almost entirely red, and a much larger cow than Dutchess, his first importation; uniting to great length, broad loins, and fair brisket, with well-developed udder, promising good milking qualities. Mr. Bates thus writes to Mr. Vail about her: "You will find Lady Barrington's pedigree in the second part of the 5th volume of the Herd-Book, page 514. She is by Cleveland Lad (3407), who obtained the highest premium at the show of the Royal Agricultural Society at Liverpool, in 1841, and also stood first, the same year, at the Yorkshire Agricultural show at Hull, and is now in possession of Lord Feversham, at Duncomb Park. The grandsire, Belvidere (1706), was sire and grandsire of the Duke of Northumberland (1940), and had been Lord Barrington's favorite cow tribe from 1794. I bought my first Lady Barrington in 1831, after the death of his lordship. This tribe generally breeds females, and I hope she will give you a lot of cows. She will breed well to your Wellington. The cow has had no forced keep, and as such is more likely to do well with you than if she had come out in high condition. I shall be glad to hear the account of your show in America, [meaning that of the New York State Agricultural Society,] and hope you will be successful in obtaining prizes."

Mr. Vail further remarks, that though large, Lady B. is not at all coarse. We have not a doubt she will prove a valuable addition to his already choice herd.

HENS.

CAN any of your readers inform an inqurer, how long after connexion with the cock the eggs of a hen will produce chickens?

How often is connexion with the cock necessary, to insure fecundity to a constantly laying hen?

Is one connexion sufficient to fertilise a brooding or ordinary nestful of eggs?

In the case of the hen turkey, when in heat, a single treading suffices for a brood of chicks—is it so with the common hen?

Do the Poland fowls lay more eggs than the common hen on the same keep, or is the superior merit claimed for them, limited to their neglect of sitting?

How long will a hen continue to be as good a layer as at one and two years old?

Is there any rule for determining the age of a hen?

What is the best food for poultry to produce the greatest quantity of eggs?

Can hens be too full fed to lay well, and does not full feeding always promote laying? Q.

SEEDING GRASS LANDS IN GEORGIA.

IN October, 1842, I seeded about four acres of red clover with wheat. It came up tolerably well, and stood the winter, and after the wheat was cut, presented as promising appearance as it does in the Northern States. I let it stand the first season and neither cut nor pastured it. In June last I cut the best, and made about two tons of good hay; part of the ground had been overflowed and drowned the clover. In July it headed again, about a foot high, when I turned my milch cows on it, and in three days they had increased their milk three fold, and it was of a much richer quality than previously, although running on good native pasture. I allowed the clover to be cropped very close, but expect in November it will give me another crop for my cows. On the whole, I think it a fair and satisfactory experiment, and this has placed it beyond a doubt, that red clover can be cultivated with success in this state. The land where it was sowed is far from being rich; four years since it was a worn out old field, and has had but little manure, and that applied to previous crops of corn and turneps. When preparing the ground for wheat, on which the clover was sowed, a two-horse turning plow was used, and a scooter plow run after in the furrow, as a substitute for a subsoil plow. A heavy iron-tooth harrow and roller followed, all of which I think very necessary to success in raising good crops of small grain and grass. I expect to seed ten acres with clover this fall, on part of which I shall sow red top with the clover. W. H. S.

Sparta, Georgia, Aug. 1, 1844.

THE LOCUST TREE.

Occasionally you have recommended the cultivation of the locust on plantations, and for shade. It has been said that the locust will spread, so as to injure the tillage in the adjoining fields, and this deters many from planting it. I am told that, in New England, they are attempting its eradication for this reason, and that even this is difficult, because where a shoot is pulled up, each broken root will send up another. On account of the freedom of the tree from insects, its general beauty of appearance, and its *rapid growth*, it is very desirable to cultivate it, especially for shade (where the Algerine custom of taking off all the forest trees has prevailed), if it can be done safely. I have planted a few, which are growing so finely as to attract the attention of most passers; but have refrained from planting more, in consequence of the above suggested difficulty. Can you give your readers any certain information on this point? (*a*) I would be glad to plant many this fall, being sure they make the best shade for the farm generally, if it is safe to do so. There are none old enough in this region to settle this matter.

A Subscriber.

Ohio, August, 1844.

P. S. The spreading is said occurs in this way—the roots extend a great distance, and shoots will spring up, and these again extend roots, and throw shoots, till the lots adjoining are filled with them.

(*a*) We have never heard of the above objections to planting locusts before, though we have seen hundreds of acres of them. Will any of our readers answer as to this point? Locusts at the north have been greatly injured by the borer; but for the last few years it has nearly disappeared, and they are now flourishing finely.

Peaches not attacked by the Curculio.—In Mr. Parson's article, page 310 of our last number, he desires us to say, that peaches should not have been included among the fruits subject to be attacked by the curculio.

Fall Plowing.—If the land abound in clay, this is essentially necessary, as frost is a much better pulveriser of the soil than the harrow and roller. Besides, fall plowing exposes insects of most kinds to destruction. Sandy or light gravelly lands may be plowed in the spring.

NEW YORK STATE AGRICULTURAL SOCIETY

ANNUAL MEETING, JANUARY, 1845

To Agricultural Writers and Farmers generally.

The annual convention of the New York State Agricultural Society, which will continue in session for several days about the middle of January proximo, will be occupied with the examination of many subjects highly important to the agricultural community and to citizens generally. The range of investigation (in the reports from committees, in the essays prepared by various writers, and in the remarks from sundry speakers), is designed to embrace all topics of leading interest in reference to such improvements as may better enable the farming community of this state to sustain itself under the competition generated by the fertile and cheap lands of the west—such as improvement in the character and management of stock—in the introduction and promotion of new branches of farming industry—in the application of science as a profitable auxiliary in various departments of rural industry, as well as in the composition of manures and the cultivation of the soil—including, not least though last, the diffusion of agricultural and horticultural knowledge through the instrumentality of the public libraries and common school organization. Sufficient is now known from consultation with gentlemen most conversant with these matters in different sections, to warrant the undersigned in expressing a belief that the approaching annual convention will concentrate the efforts of the friends of agriculture in a manner eminently conducive to the great objects for which agricultural organization is desirable. The mornings and afternoons will be devoted to business, at the agricultural Hall, in the Old State House, at Albany; and the evenings to sociable intercourse among the members of the state and county societies, and other friends of agriculture and horticulture from all sections of the state of New York, and from several neighboring states. The hospitality of the friends of the cause in and around Albany, the undersigned also feels warranted in saying, will be manifested liberally in providing comfortable quarters for gentlemen attending the convention on this interesting occasion. The multiplicity of business and the immense crowds at the state fair and cattle shows, render it impracticable on those occasions to convene the friends of agriculture as fully as desirable for deliberation, discussion, and sociability; and it is hoped and believed that the January convention will furnish opportunities for promoting these objects, to the satisfaction of agriculturists and friends who may honor the convention with their presence from this and other states.

It may be added that the agricultural meetings, commenced satisfactorily last winter, will be continued on each Thursday evening of the approaching winter; and friends of the cause generally are invited to attend, at the society's hall.

Among the business which will employ the time of the state society at the annual meeting, will be an examination and decision on the merits of the reports and essays and books on the various subjects embodied in the following schedule, adopted by the executive committee—John. P. Beekman, President, in the chair—several of the premiums, on important subjects (as stated when premiums were first offered months ago), being open to competition from citizens of other states as well as New York—a fact which editors are particularly requested to notice:

PREMIUMS OFFERED—

Which were not included in the list published in our May No., page 146 and following:

For the best text-book on agriculture and horticulture, for the use of schools (copyright reserved to the author), $100.

For the best essay, detailing observations made on the culture and diseases of the potato, with special reference to the phenomena of the extraordinary visitation which has largely desolated the potato crop in the United States, and embracing suggestions for counteracting the difficulty in future cultivation of that crop—a gold medal worth $20.

For the best essay on the means of diffusing scientific knowledge in connexion with agricultural and horticultural information, through the instrumentality of the public libraries and schools, with a catalogue of books suitable for the purpose—a gold medal worth $20.

HENRY O'REILLY, *Rec. Sec.*,
Agricultural Hall, Old State House, Albany.

NORTHERN CALENDAR FOR NOVEMBER.

IT is now time to close up the operations of the warm season, and provide for the cold. Finish collecting in all your crops, corn, turneps, cabbages, &c., and see that your cellars are well secured against frost, and your granaries against depredators. Finish the fall plowing. All clay land should be thrown into ridges for the action of the frost. One good plowing on such land in the fall is worth two or three in the spring, and as the soil has a great affinity for ammonia, while thus exposed, it will absorb large quantities of it brought down in the winter and spring, by the snows and rain, which it will yield to the crops the ensuing season. Examine the winter grain and any water furrows which have become choked up, let them be opened. *Standing water will kill any useful vegetable*, excepting rice.

The yards should be well bedded with turf, peat, or muck, weeds, refuse straw, and other vegetable matters; and so constructed that the soluble parts of it, which are the best, shall not be drained off to help inundate the roads and ditches. If time permits, drains should be made to carry off the latent water, which destroys the crops, or diminishes them so much as hardly to pay for the raising. Underground, in preference to surface drains, should always be constructed, unless large quantities of water are required to pass. Give all your roots in heaps for the winter an additional covering before the ground is frozen. Have all the barns and sheds well covered and mended, and the racks and mangers all tight, and in order, that no hay or provender may be wasted. Before the ground is frozen, look well to your fences. No meadows, winter grain, or even pastures, should be exposed to poaching from cattle, sheep, or hogs. An animal will frequently do more hurt in one of them in a day at this season, than in a week while the ground is well settled in summer. In the meantime the household plants—the children—should not be neglected, and especially the older ones who have helped through the labors of the summer and harvests. Good schools must be provided for them, good teachers, and good books. Their minds now, and indeed at all times, should be as closely watched over as the more tangible things of the farm. On their correct moral and intellectual education, depends much, perhaps all their success in after life, and no fences should be neglected, or bars left down in their young minds. Good seed sown here, on good soil, and well cultivated, if the weeds of vice and bad principles are thoroughly extirpated, will never fail of producing an abundant harvest. It is not sufficient that their parents see them furnished with all the means for mental improvement; they must take an interest in their studies also. Daily examination into the progress of their children, should be the constant practice of parents; questions asked having a bearing upon them; the connexion between their studies and their own business pointed out, to show that they have a practical application to the concerns of every-day life; and they should be explained and illustrated in such a manner as to excite an interest and inquiry in their young minds. The discipline of the school ought to be inquired into, and the relative standing of the children; and when praise is due, bestow it; and where censure and even punishment are needed, they should not be withheld. No farmer would think of putting out his land to be managed by an agent without frequent and close supervision. Do not, therefore, put out the minds of your children, which are of infinitely more value, to the management of every individual, without a closer and more thorough attention than he gives to his grounds and his cattle.

Commence spreading out hemp for dew rotting, bearing in mind the observations on this subject last month.

KITCHEN GARDEN.—If not done last month, many of the early vegetables may be sown for the ensuing spring, if you have not hot beds for forcing. The beds ought to be thrown up high, so as to avoid water during winter and spring, and being soon dry when the snow is off, the young plants will take an early start. They should be well-filled with the heating manure, as horse dung, &c. In these, tomatoes, lettuce, spinage, cress, &c., may be sown. The asparagus bed should have a large supply of rich manure, which the winter rains will drain of all its enriching soluble matters and carry to the lowest roots, and on the opening of spring, will be ready to furnish a fresh treat for the table. Let the lettuces in frames still be exposed to the air during the day, but be covered by the glass at night. Practise the same treatment with cabbages and cauliflowers in frames. Take up all the remaining roots and store as detailed last month. Rhubarb seed can now be sown, and will vegetate better than if kept out of the ground until spring. In the early part of this month, manure and trench the ground intended for early spring crops.

FRUIT GARDEN AND ORCHARD.—Gooseberries, currants, and raspberries, may now be transplanted. Of the latter the red and white Antwerp are considered the most desirable. Do this the early part of the month, and in the latter part lay down the raspberries, and cover them with sedge or any kind of litter. Cover the strawberries with litter or they may be killed, or at least injured, by the winter. Dig and trench or plow the ground intended for planting in the spring.

FLOWER GARDEN AND PLEASURE GROUNDS.—The directions for last month will also apply to this, while the ground is free from frost. The latter part of the month cover the flower borders and bulbous beds, and also all flowery plants and shrubs with a litter of straw or of salt hay.

FOREIGN AGRICULTURAL NEWS.

By the steamship Acadia we are in receipt of our European journals to the 4th of October.

Markets.—*Ashes.* Large sales in Pots and little doing in Pearls—a slight advance has taken place. *Cotton* remained without change since the departure of the Caledonia on the 19th ult., so that the depression of price during the month of September has been only ¼d. per lb. There is a steady demand. Stock on hand at Liverpool on the 1st of October, 904,500 bales, against 814,000 same date last year. *Flour* and *Grain* still continue excessively dull. *Provisions.* Beef, Pork, and Cheese, considerable inquiry, especially of the finer kinds; Lard had advanced from 6d. to 1s. per cwt.; English Cheese is short in quantity this year, owing to the great drought. *Naval Stores* were quite active. *Tallow* and *Tobacco* the same.

Money is easy and abundant, though a good demand exists for it.

American Stocks. A slightly increased confidence is taking place in them.

Trade still continued active.

The Harvesting of grain was nearly over. The crops are good and uncommonly well secured.

Guano from Ichaboe was selling from £6 to £6 5s. per ton. When it can be had in the U. S. as reasonably our farmers will use large quantities.

Wool. About 20,000 bales of Australian was advertised in London for sale soon at auction. A large number of buyers were flocking in, and good prices for it were anticipated.

American Hay. That which has been exported to England was of timothy or herds-grass, which being much coarser than English hay, prejudiced buyers against it. They formed their opinion of the hay from its coarseness, and not from its quality for feeding. We are persuaded that for nutriment it is equal, if not superior to most English. The prices it sold at were low, and in several instances subject the shippers to a loss. We hope the English people will try the quality of our hay before they allow their prejudices to condemn it.

Sales of Durham Cattle.—These continue to bring high prices in England. Mr. Whitaker has just sold his entire herd at auction, consisting of 79 head. The highest price obtained was for Buchan Hero, 350 guineas ($1,750); the lowest, a cow, at £25. The lot averaged £51 7s. each (say $250). Mr. Yorke had a large sale averaging £35 each. Mr. Smith also had a spirited sale of Durhams. Several of the above animals were purchased for the continent. The King of the French bought the Earl of Buchan, calved July, 1843, for 200 guineas.

Twin Chickens.—It having been deemed advisable by Mr. Walters, the superintendent of her Majesty's aviary, in order to improve the breed of the genuine Dorking fowl, that it should be crossed with that of the Cochin China fowl, the necessary arrangements were made for that purpose. A Dorking hen, which had roosted for some time past with the fowls from China, has recently been in the habit of laying twice, and sometimes thrice a week, eggs containing double, or two distinct yolks. Mr. Walters, determining to try the experiment of attempting to hatch one of these double-yolked eggs, placed it, with several other eggs, under the hen. The result was that two chickens were produced from this single egg; one is a cock bird of the pure Cochin China breed, and the other is a hen chick of the Dorking species, both of which are now five days old and in good health. This is a circumstance, as we are informed, unprecedented in the annals of natural history.—*New Farmers' Journal.*

Three Hundred and Twenty Bushels of Wheat per Acre.—It has been asserted by some, and sneered at by others in this country, that 100 bushels of wheat could be easily grown upon a single acre. It will be seen that the following little experiment in England produced at the rate of 320 bushels! The imperial bushel contains 2,218·192 cubic inches; the Winchester (our common bushel), 2,150·42; the imperial bushel, therefore, is to the Winchester as 1 to ·969447. The English quarter of wheat is 8 imperial bushels of 70 lbs. each, equal to 9⅓ American bushels of 60 lbs. each.

At the end of August, 1843, I planted in my garden 32 grains of wheat, at 6 inches distance, an inch and a half deep; the seed was of the first-rate quality. This seed produced this year 32 plants, having from 10 to 28 stems and ears each; the average number of ears was 16; the average weight of each plant 1¾ ounce. An acre of land would contain, at 6 inches distance, 174,240 plants; the produce 304,940 oz., or nearly 19,600 lbs., 320 bushels, or 40 quarters per acre. The expense of dibbling would be more than saved by the diminished quantity of seed required. I do not mean to state that such a result would be obtained upon a large scale; but I think it is worthy of trial, when we know that the average produce is only 2½ quarters per acre, and that it is possible (?) to grow 40: it will be allowed that there is ample scope for improvement. Try a breadth in your fields an inch and a half deep; put 1 grain, and 1 only, in each hole—plant it at 6 or 8 inches distant—be sure to plant good seed—get as much produce as you can, but go for 40 quarters per acre.

Grafting the Chesnut on the Oak.—In the department of the Correze, an oak, engrafted eight years ago with chesnut, has produced at length chesnuts of good quality. The success of this experiment is deemed important for extensive districts where the oak flourishes and the chesnut is barren, and where the fruit is needed for food.

Mexican Pheasants.—A pair of these superb birds has recently been sent to the Queen of England. They are of immense size, being nearly as large as a turkey. Their crests are black, resembling in shape a cockatoo's, which it is expected will change to a bright yellow color, when they have attained a certain age. The feathers from their crests along their backs are perfectly black, having an extraordinary woolly appearance. Their fine full breasts are also black, beautifully spangled with white. Their legs and gills are of a rich red color. They have now become so exceedingly tame that they will feed from the hands of her Majesty and the Prince Consort.

Preserving Apples in Pits.—Apples may be kept in pits after the manner of potatoes; we have seen this practised both in France and England with success; but the fruit does not keep long after it is taken out; consequently, only a small quantity should be taken out at one time, and the pit should be instantly closed up, to prevent the admission of air. Apples kept in this manner will be found quite good and sound in the months of May and June, or even July, if they have been pitted in a careful manner, all bruised ones being rejected, which would destroy the others. A little powdered charcoal should be carefully sifted over the apples as they are laid up, which should be done in regular layers. The charcoal absorbs any moisture that is given off by the apples, and keeps all cool. After this is done, take some clean wheat straw, or hay, and lay it over the fruit, to the thickness of a foot, fastening it down with ropes made of the same material, then cover them up with earth to the depth of a foot. This covering will prevent any change in the atmosphere from reaching the apples. The operation should be performed in dry weather.—*Gardeners' Chronicle.*

Instructions for Using Guano.—In the application of this valuable manure, it is necessary to keep in view its powerful properties, and to exercise great care to prevent its coming into immediate contact with the newly sown seed or the foliage of plants and flowers. It should never be placed in contact with seeds; for all seeds in the process of germination give off a greater or less quantity of carbonic acid and vinegar; and these acids having strong affinities for the ammoniacal portion of the guano, are apt to attract it so powerfully, as to check and even destroy vegetation.

Preparation.—To secure its safe application, it has been found most effectual to mix it with about four times its own bulk of finely sifted mould, ashes, or charcoal, or even with sand, if the soil be of a cold clayey nature; and that the mixture may be complete, the guano should, *before mixing*, be carefully passed through a fine garden sieve. That portion of the guano, such as the undecomposed bones, beaks, or claws of birds, which can not be passed through the sieve, will nevertheless be found strongly impregnated with ammoniacal salts, and by steeping in water, will readily yield a rich liquid manure. An intelligent farmer in Dumfriesshire, in reference to the necessity of mixing the guano before applying it to the soil, writes as follows:—The objects of mixing guano are, 1. To partly disinfect it by absorbing its volatile products and diminishing its smell. 2. To separate its active particles, and thereby diminish their action on each other. 3. To present it to warm soils in a form in which its action will be less violent at first, but more protracted and steady than when given in an unmixed state. Of course, the colder the soil, and the earlier the season when sown, the less quantity of mixed is needed, and conversely. But as a general rule, it should be mixed as equally as possible, with four times its bulk of finely sifted, moderately dry, black or brown colored earth, or peaty matter, sawdust, slightly burnt clay, charred turf, coal or peat ashes, whichever of these substances can be most conveniently had. Perhaps newly burnt charcoal used as soon as cold, is the best matter that can be had for mixing; but as it can seldom be at the farmer's command, any of the above matters will answer in its stead.

A mixture of gypsum with guano can seldom do any hurt, and for turneps or clover on light soils, it may often be advantageous.

A very simple and economical mode of preparing guano for use, is to spread 2 cwt. of dry sifted mould, &c., three or four inches thick; lay 1 cwt. of sifted guano over it, and 2 cwt. of the mould, &c., on that again; leave the heap for two or three days protected from the weather, then let it be well mixed, and sifted through a common garden sieve. Thus prepared, it can be sown without inconvenience to the farmer, and spread without loss evenly over the field.

Guano may be also used with equal safety in a liquid state, dissolved in water, and perhaps this is the most effectual mode of developing its powers, for like all concentrated fertilizers, it requires a considerable supply of moisture, and has always exhibited the most productive results during wet seasons. For this reason it is particularly desirable that the dry mixture or compost, as we shall call it through these directions, should be used immediately before rain. But as irrigation is too tedious and costly for extensive operations, the liquid application is almost necessarily confined to the flower and kitchen garden.

Apportionment.—The quantities in which guano should be used, are necessarily regulated by the variety of crop and vegetation, also by the period of the season, the system of cropping, the state of the soil and its previous treatment; therefore the applications may with propriety vary from 2 cwt. to 8 cwt. per imperial acre, *when given alone.* When a portion of dung, bones, or other manure, has been applied, the quantity of guano must be correspondingly diminished. In apportioning the guano nothing can exceed the accuracy of weights and scales; but it may be convenient to keep in mind that one bushel of sifted guano weighs about 52 lbs. to 54 lbs. For smaller or botanical applications, one heaped pint may be reckoned equal to 1 lb. of sifted guano.

Application.—The compost may be sown, either broadcast or in drills, according to crop; but the most successful applications have been made with the use of the common machine employed for drilling the manure and seed at the same time, the operation of this machine being to deposite the guano compost so much deeper than the seed, as to allow a portion of soil to intervene. Whichever may be the mode adopted, the two primary objects of the application should be accomplished, viz., distributing the manure equally and covering it speedily.

The above is quoted from a Manual on Guano, by James Clark, published in London.

Effect of Folding Sheep on Wheat.—This experiment was tried on a field in 1843, plowed down and prepared for wheat, manuring it with 20 loads of dung, mixed with double that quantity of earth, and tilled in the following October. In March, 1844, folded Southdown sheep and lambs on it by night, to the proportion of from 800 to 1,000 sheep to the acre, changing their ground every night, and turning them into grass pasture by day. The difference between the wheat grown on the folded ground, and on the portion not folded was very manifest. Specimens of wheat affected by the foregoing modes of management were produced, fully confirming the statements made.—*New Farmers' Jour.*

Monster Mushroom.—A mushroom was gathered on Tuesday last in a field belonging to Edmund Hornby, Esq., of Dalton Hall, which measured thirty inches in circumference, and was upward of one and a half inches thick.—*Ib.*

Number of Bees and Cells in a Hive.—A bee-hive, which was opened by Swammerdam, was found to contain one queen bee, 33 males or drones, 5,635 working bees, 45 eggs, and 150 worms. Total population, 5,854; for whose accommodation there were 3,392 wax cells for the use of the working bees, 62 cells containing bees' bread, and 236 cells in which honey had been deposited: in all 3,620 cells. From this observation it may be presumed that the hives contain 5,000 to 6,000 inhabitants, among which there is only one female, viz., the queen bee, and from 3,000 to 4,000 cells.—*Ib.*

Yellow Millet.—This is the Chinese peasant's plant *par excellence.* Its grain is the basis of his nutriment. The stalk is food for his cattle, in the place of hay, which they have never thought of cutting. The straw of another species of millet, which attains a height of fifteen feet, is used to make the fences of his garden, and serves also for fuel.

Curious Hen.—There is now in the possession of Mr. Hook, boot and shoe maker, Norfolk street, a very curious hen. It is without any beak, and resembles the face of a dog. It can procure its food with the greatest facility, and we understand is complete master of its companions.

A White Swallow was taken out of a nest in Twyning church last week by a Mr. Thomas Brown, plumber, of Tewkesbury, and was kept alive for a couple of days. It has since been stuffed.

Editor's Table.

Large Quinces.—The Massachusetts Plowman acknowledges the receipt of quinces from Mr. Charles Hathaway of Grafton, twenty of which weighed 18 lbs. One weighed 18 ounces, and measured 13½ inches round. The same paper speaks of another received from Mr. John Henry of Leominster, which weighed 23 ounces!

Hemp Brake.—The Tennessee Agriculturist says one of these machines has lately been invented by C. B. Butler, which breaks 200 lbs. per hour.

Toads Destroyers of Ants.—A writer in the Cultivator asserts that toads quartered near ant hills will destroy them in a short time. We think they would do their work more rapidly if they were confined there in a box open at the top and bottom, and placed round the ant hill.

Agricultural Survey.—We notice in the Cincinnati Gazette, that Charles Whittlesey, Esq., and Mr. A. Randall, editor of the Plow-Boy, have been authorized by the Hamilton County Agricultural Society to make a survey of the farms of this county, and intend entering upon the duty forthwith. They will examine and analyze soils; take the statistics of crops and live stock; collect as far as they can the profits of agricultural labor in this county; note the peculiarities of farming implements in successful use; make drawings of the best horses, cattle, sheep, and hogs, they may meet with; and give descriptions of the most approved fruits, vegetables, and grasses. They propose, after getting through, to publish in convenient form a report of the results of their combined observations, which they place at the price of $1 per copy, and for which they solicit subscribers. This is an excellent movement. Will not the counties of the empire state imitate it?

A Big Baby.—A medical friend has just given us an account of a child, born in Franklin, a few days since, which weighed, at birth, no less than *sixteen pounds and a half*, and measured from the chin to the back of the head sixteen inches and three quarters. It is a boy, and is doing well. Children at birth, we are informed, seldom weigh more than ten or eleven pounds. This is a great country for the production of babies—they grow too at an amazing rate. Query—Is this owing to the Teche water, or the superabundance of electricity in the atmosphere? We cut the above from the Planters' Banner, and if any of our northern farmers can beat this great *agricultural product*, we shall be glad to hear from them.

Losses by the Flood on the Mississippi and its Tributaries the past Summer.—These are estimated by the Concordia Intelligencer (La.) at $6,677,000.

Agricultural Products of the U. S. for 1843.—

Wheat, - - - -	100,310,856	bushels.
Barley, - - - - -	3220,721	"
Oats, - - - - -	145,929,966	"
Rye, - - - - -	24,280,271	"
Buckwheat, - - - -	7,959,410	"
Indian Corn, - - - -	494,618,306	"
Potatoes, - - - -	105,756,133	"
Hay, - - - - -	15,419,807	tons.
Flax and Hemp, - -	161,007	"
Tobacco, - - - - -	185,731,554	pounds.
Cotton, - - - - -	747,660,090	"
Rice, - - - - -	89,879,145	"
Silk Cocoons, - -	315,965	"
Sugar, - - - - -	126,400,310	"
Wine, - - - - -	139,240	gallons.

The supposed value of the above, $607,185,413. The articles of wheat, barley, buckwheat, potatoes, tobacco, rice, and sugar, amounted to less in 1843 than in 1842; though the aggregate value of all the above-named articles in 1843, was $24,545,445 greater than in 1842. The population of the United States in 1843 was 19,183,583.—*National Intelligencer.*

Pickled Cabbages.—Quarter the firm head of the cabbage; put the parts in a keg, sprinkle on them a good quantity of salt, and let them remain five or six days. To a gallon of vinegar put an ounce of mace, and one of peppercorns and cinnamon. Cloves and allspice may be added, but they darken the color of the cabbage. Heat the vinegar scalding hot, add a little alum, and turn it while hot on the cabbage, the salt remaining.—*Mass. Plowman.*

Corn Bread.—Take as much corn meal as you wish to cook, scald it well, by pouring boiling water over it and stirring it thoroughly; then mix it to the consistency of batter, with milk; if it is pretty rich it won't hurt it, but mind the mixing part, that it is thoroughly done, the more the better. Put in one egg, a teaspoonful of salæratus and a tablespoonful or more of lard. Mix the whole thoroughly together, till the ingredients are entirely incorporated through the whole; mind, I say, the mixing, the more the better. It is now to be baked as usual, about three quarters of an hour, and you will have the finest corn bread you ever ate.—*Western Farmer.*

Culture of Corn in Cane Land.—The cane, it seems, is all cut down in swaths, and laid toward the left. When a sufficient quantity of ground is thus cut over, the prostrate cane is burnt. The tough roots in the ground utterly forbid plowing, so that holes are made in the ground with a stick for the reception of the corn. The corn comes up finely, and grows well on this new ground without any plowing or other attention than simply this: a growth puts up from the roots of the cane, which is called mutton cane. This it is necessary to destroy, and it is done by the hands walking over the field with a stick in hand and knocking the young muttons down wherever they appear. They easily snap off like pipe-stems. It is a common thing, in these hills, we understand, to raise fine crops of corn without any plowing.—*South Western Farmer.*

Ripe Fruit and Dysentery.—There is a pernicious prejudice with which people are too generally imbued—that fruits are injurious in the dysentery—that they produce and increase it. There is not, perhaps, a more false prejudice. Bad fruit, and that which is imperfectly ripened, may occasion colics, and sometimes diarrhœa, but *never* epidemic dysentery. Ripe fruits of all kinds, especially in the summer, are the true preservatives against this malady. The greatest injury that they can do, is in dissolving the humors, and particularly the bile, of which they are the true solvents, and occasion a diarrhœa. But even this diarrhœa is a protection against the dysentery. Whenever the dysentery has prevailed, I have eaten less animal food and more fruit, and have never had the slightest attack. I have seen eleven patients in one house; nine were obedient to the direction given, and ate fruit—they recovered. The grandmother, and a child she was most partial to, died. She prescribed for the child burnt *brandy* and oil, powerful aromatics, and forbade the use of fruit. She followed the same course herself, and met the like fate. A minister attacked with dysentery ate three pounds of red currants between 7 o'clock in the morning and 9 in the evening—next day he was entirely cured.—*Tissot.*

Profit of Growing Mustard Seed.—We have recently purchased from J. H. Parmlee of Ohio, a part of his crop of brown mustard seed, raised, as he informed us, on 27 acres of good rich land, prepared with as much care as is usually bestowed upon good land. The seed, he says, was planted in rows one foot apart one way, and two feet the other. The crop was well worked during the season, and when near ripe was cut with sickles, laid on sheets or wagon covers, hauled to the barn in the sheets, and there threshed out and fanned.

He has delivered to us a part of the product of 27 acres of land, 114 barrels, containing 382 bushels of 45 lbs. of brown mustard seed, weighing 52½ lbs. per bushel, making 20,100 lbs., for which we paid him 8 cts. per lb., making - - - - $1608 00

And he has, he says, 100 bushels of tailings, which he estimates will clean up 75 bushels, say 50 lbs. per bushel, making 3,750 lbs., at 8 cts., - - - - - 300 00

Product of 27 acres of brown mustard seed, $1908 00 or $70 66 per acre.—*Farmers' Cabinet.*

Nursery of Mr. Samuel Reeve, Salem, New Jersey.—We have received the Saturday Post, containing a description of a great variety of apples, &c., &c., in this old established and excellent nursery.

Extraordinary Yield of Squashes.—Mr. Benjamin Weld, of Roxbury, informs us that from one vine of the Valparaiso squash, he gathered 11 squashes, weighing as follows, viz: 84 lbs., 73, 69, 62, 59, 58, 44, 27, 22, 20, 10—making a total of 528 lbs., which he sold for $5 on the ground.—*New England Farmer.*

Monster Vines.—Mr. Seaver Pray, of South Weymouth, informs us that Mr. Joseph B. Smith, of that town, had a squash vine this year, measuring 263 feet 5 inches in length. The same vine bore 3 squashes, weighing 77½ lbs. He also had potato tops on the same piece of ground, that measured 8 feet and 1 inch in length. These were raised on meadow land, where he plowed in gravel.—*Ib.*

Great Yield of Pumpkins.—Chas. L. Pierce, gardener to Dr. B. F. Haywood, in this town, raised the present year, from a single seed, 15 pumpkins, weighing 384 lbs. The largest weighed 31½ lbs., and the average of the whole was 25½ lbs. each. The vine, including all the branches, measured 635 feet in length. —*Worcester Spy.*

Disease in Potatoes.—Mr. Teschemacher, in the New England Farmer, attributes this disease to a species of fungus on the tubers. He recommends a liberal supply of salt to be spread on the land planted next year in potatoes, where the disease appeared this season, as a remedy for it. Others attribute the disease to an insect. The Westfield Newsletter says:—"From some of the infected potatoes may be seen the insect in its pupa state escaping. In others you may, upon boiling, find the rudiments of the insect in embryo, while in others nothing will be found, the insect having escaped. As to the health of the potato, it is like all other defective fruits, but no worse, and when sound as healthy as at any previous year. The insect feeds upon the leaves and stems, when full grown retires to the roots of potatoes, and there deposites its eggs, which soon hatch; in a few days they retire from the potato to the ground, where it completes its final transformation."

From the limited observations we have had an opportunity of making, we must confess that we think the disease in potatoes comes from a variety of causes, each of which seem to produce nearly the same effect.

Poultry.—Error Corrected.—Mr. Bement writes us that we were in error, in our account of the late show of the State Society, in giving credit to him for an exhibition of poultry, the said fowls belonging to some one else, we believe Mr. D. B. Fuller, of Hyde Park, who also had some very choice birds in the magnificent car which he in part commanded on that occasion. Our mistake occurred from seeing Mr. Bement's name written on the pen containing the poultry spoken of. He regrets now that he did not exhibit, quoting jokingly the old saying of having "a much finer animal at home," &c. Now, as to this last observation, he must allow us to add, we shall *believe* it when we see it at the next State Society show. This having much "finer fowls at home," is, in our opinion, a good deal like the man who boasted of leaping 50 feet at a single step; but when called upon to do the same here, replied, oh, that was *at home* in the East Indies where he performed the feat, and he must have Asiatic ground to do it on again! Good.

Pickle for Hams.—To 1,000 lbs. of hams take three pecks of salt, three pounds of saltpetre, two quarts of hickory ashes, two quarts of molasses, and two teacups of red pepper; mix all well together on a salting table; rub the rind or skin of the ham well, and sprinkle with the balance; let it lie from five to six weeks, then hang up and smoke with green hickory wood for five or six weeks; a little sawdust also, if convenient. The red pepper prevents the skipper, I think. If the hogs are very large, I think more salt would be required. I generally put the large hams at the bottom of the tub.—*Ellsworth's Report.*

A Monster Cabbage.—Mr. Ethan Burroughs of Ferrisburgh, presented us last week with a perfect monstrosity in the shape of a cabbage. When placed upon its face it covered a surface of 13 feet in circumference—measured around the solid head 6 feet, and weighed 33 pounds. If any one has got a match to this, let him produce it.—*Vergennes Vermonter.*

Splendid Flowers.—Mr. Hovey, editor of the Magazine of Horticulture, is now making a tour in England, and in his notices of flowers, &c., abroad, thus speaks:

"Of all the objects which have as yet attracted our attention, none have compared with the display of the *Lilium* lancifòlium, in the collection of Mr. Groom, of Clapham. We have on several occasions noticed these lilies, and at least three of them have been described in our pages, from the journals where they have been figured, and each of these have flowered in the collections in our vicinity; not, however, in anything like the splendor in which they are to be seen around London at this moment. What an expedition was that of Siebold to Japan! If the question were to be asked us, what we consider the greatest acquisition within the last twenty years, we should say, the Japan lilies. Indeed, we would almost say, that nothing but the Camellia, during the last century, has been greater. But the lilies were not all; the camellias, the clematises, *S*èdum Siebòld*ii*, and many other things, will long perpetuate the name of Dr. Siebold, and render it familiar to all lovers of plants.

"There are now *four* varieties, called by Mr. Groom as follows:—*L.* lancifòlium álbum, punctàtum, ròseum, rùbrum; the latter, perhaps, better known as the *L.* speciòsum. They may be classed, in regard to their beauty, the reverse of the above, viz., rùbrum the most, and álbum the least, splendid; but each of them of surpassing beauty: álbum and punctutàtum are the most common, and ròseum the rarest, having been recently received from Ghent. Good strong flowering bulbs of each command very high prices."

To CORRESPONDENTS.—Experimenter will find by looking over the price current of this month that his wishes are complied with. The extract from Johnstone shall appear in our next, if we can find room. M. W. P., Pigeon-Houses, and everything else asked for, will appear in next volume.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, OCTOBER 23, 1844.

ASHES, Pots,	per 100 lbs.	$4 12	to	$4 19
Pearls,	do.	4 25	"	4 31
BACON SIDES, Smoked,	per lb.	3½	"	4½
In pickle	do.	3	"	4
BALE ROPE	do.	6	"	9
BARK, Quercitron	per ton	24 00	"	25 00
BARLEY	per bush.	66	"	69
BEANS, White	do.	1 25	"	1 75
BEEF, Mess	per bbl.	5 00	"	7 00
Prime	do.	3 00	"	5 00
Smoked	per lb.	5	"	7
Rounds, in pickle	do.	3	"	5
BEESWAX, Am. Yellow	do.	28	"	31
BOLT ROPE	do.	12	"	13
BRISTLES, American	do.	25	"	65
BUTTER, Table	do.	15	"	18
Shipping	do.	8	"	12
CANDLES, Mould, Tallow	do.	9	"	12
Sperm	do.	28	"	38
Stearic	do.	20	"	25
CHEESE	do.	3	"	7
CLOVER SEED	per lb.	7	"	8
COAL, Anthracite	2000 lbs.	4 50	"	5 75
CORDAGE, American	per lb.	11	"	12
CORN, Northern	per bush.	50	"	53
Southern	do.	49	"	52
COTTON	per lb.	5	"	9
COTTON BAGGING, Amer. hemp	per yard.	16	"	18
American Flax	do.	16	"	17
FEATHERS	per lb.	30	"	35
FLAX, American	do.	8	"	8½
FLAX SEED, rough	per 7 bush.	9 00	"	9 75
clean	do.	10 00	"	10 50
FLOUR, Northern and Western	per bbl,	4 50	"	4 88
Fancy	do.	5 00	"	5 38
Southern	per bbl.	4 50	"	4 88
Richmond City Mills	do.	5 50	"	5 75
Rye	do.	3 25	"	3 50
HAMS, Smoked	per lb.	5	"	10
Pickled	do.	4	"	7
HAY	per 100 lbs.	40	"	45
HIDES, Dry Southern	per lb.	9	"	11
HEMP, Russia, clean	per ton.	172 00	"	175 00
American, water-rotted	do.	125 00	"	170 00
do dew-rotted	do.	75 00	"	125 00
HOPS	per lb.	10	"	12
HORNS	per 100	1 25	"	5 00
LARD	per lb.	5½	"	6½
LEAD	do.	3½	"	4
Sheet and bar	do.	4	"	4½
MEAL, Corn	per bbl.	2 44	"	2 75
Corn	per hhd.	12 25	"	12 50
MOLASSES, New Orleans	per gal.	27	"	30
MUSTARD, American	per lb.	16	"	31
OATS, Northern	per bush.	32	"	33
Southern	do.	29	"	31
OIL, Linseed, American	per gal.	70	"	72
Castor	do.	80	"	85
Lard	do.	55	"	65
OIL CAKE	per 100 lbs.	1 00	"	— —
PEAS, Field.	per bush.	1 25	"	— —
PITCH	per bbl.	1 00	"	1 12
PLASTER OF PARIS	per ton.	2 50	"	2 62
Ground, in bbls. of 350 lbs	per cwt.	1 12	"	— —
PORK, Mess	per bbl.	8 25	"	10 00
Prime	do.	6 50	"	8 12
RICE	per 100 lbs.	2 62	"	3 12
ROSIN	per bbl.	58	"	75
RYE	per bush.	71	"	72
SALT	per sack	1 30	"	1 40
Common,	per bushel	27	"	30
SHOULDERS, Smoked	per lb.	4	"	6
Pickled	do	3	"	4
SODA, Ash, cont'g 80 per cent. soda,	per lb.	3	"	3½
Sulphate Soda, ground,	do.	1	"	—
SPIRITS TURPENTINE, Southern	per gal.	35	"	38
SUGAR, New Orleans	per lb.	5	"	8
SUMAC, American	per ton	25 00	"	27 50
TALLOW	per lb.	6	"	7½
TAR	per bbl.	1 75	"	1 87
TIMOTHY SEED	per 7 bush.	11 00	"	13 00
TOBACCO	per lb.	2½	"	6½
TURPENTINE	per bbl.	2 25	"	2 75
WHEAT, Western	per bush.	95	"	1 05
Southern	do.	95	"	1 00
WHISKEY, American	per gal.	26	"	27½
WOOL, Saxony	per lb.	45	"	65
Merino	do.	40	"	50
Half-blood	do.	35	"	40
Common	do.	25	"	30

New York Cattle Market—Oct. 21.

At market, 1350 Beef Cattle (200 from the south), 40 Cows and Calves, and 2500 Sheep and Lambs.

PRICES.—*Beef Cattle*—In brisk demand at $4.25 *a* 4.75, to $5.25 *a* 5.50 for retailing qualities—unsold 200.

Cows—The same as last week, $15 *a* 25—all sold.

Sheep and Lambs.—We quote the former $1.12 *a* 4.00, as in quality, and the latter 87½ *a* $2.50—left over 250.

—

REMARKS.—*Ashes* remain unchanged by the late news. *Cotton* the same. Export from the United States since 1st September last, 93,728 bales; same time last year, 11,320; same time year before, 37,593. *Flour*—The great quantity afloat has had a tendency to depress the market. *Grain*—Wheat, Rye, and Corn, steady; Barley quite scarce; Oats plenty and dull. *Hay* in good demand for shipping. *Hemp* little inquiry. *Molasses* very firm. *Naval Stores* rather heavy. *Provisions* of all kinds, with the exception of Beef, quite brisk. *Sugar* in fair demand. *Tobacco* quiet. *Wool* the same. By reference to the Price Current of November last, it will be seen that agricultural products on the average are quite as high now, if not higher, than at that period, so that all croakers about falling prices are completely at fault.

Money without change—plenty in the city at 4 to 6 per cent., in the country hard to be got.

Stocks have fluctuated somewhat the past month, having been influenced by the alternate hopes and fears of each political party in the coming Presidential election.

Business generally pretty good, though not equal to that of last year at this time.

The Weather. During September there were the greatest extremes we ever experienced, it being excessively hot for the first 23 days, and then snow falling on the mountains at the north 9 inches deep. October has been rather a wet month, with disastrous storms, especially at the west. On the lakes we have accounts of the most fearful gale within the memory of man, and very destructive of life and property. The latter part of the month has been sunny and warm. The crops are now all pretty well secured, and much more than an average, take them all in all, for which we ought to be grateful to a kind and superintending Providence.

JOHNSTONE'S AGRICULTURE.

Now completed, in 1 volume, Lectures on the Application of Chemistry and Geology to Agriculture. By J. F. W. Johnstone. Complete in one thick vol.—Price, $1 50.

"It is unquestionably the most important contribution to agricultural science, and destined to exert a most beneficial influence in this country."—*Prof. Silliman.*

"A work of great value to the agriculturist who would avail himself of the aid of science in the cultivation of his land."—*Am. Agriculturist.*

"This truly valuable work forms the only complete treatise on the whole subject to be found in any language."—*Blackwood's Mag.*

"The most complete account of agricultural chemistry we possess."—*Royal Agricultural Journal.*

"We only wish it were in the hands of every farmer's son in the country."—*Durham Advertiser.*

"Nothing hitherto published has at all equalled it, both as regards true science and sound common sense."—*Quar. Journal of Agriculture.*

"A valuable and interesting course of lectures."—*London Quar Review.*

Published and for sale by
WILEY & PUTNAM, 161 Broadway.

AYRSHIRE CATTLE FOR SALE.

For sale an imported Ayrshire bull, 4 years old, selected by one of the most competent judges in Scotland, from one of the best herds. His superior is not in this country—price $200. Also a bull calf 17 months old, got by the above bull, and from an imported Ayrshire cow—price $100. A bull calf 2 months old, of similar character—price $50.

Apply to the editor of this paper.

IMPORTED AYRSHIRE CATTLE.

The subscriber offers for sale the imported Ayrshire *Bull and Cow* exhibited by him at the late State Show, both of which received premiums. Also, a yearling bull, and a bull calf 7 weeks old, out of the above.

Also, a very superior Durham bull calf, 6 months old.

JOEL RATHBONE.

Albany, Sept. 26, 1844. 3t

DURHAM CATTLE FOR SALE.

One or two cows, 3 years old, in calf by the Duke of Wellington, and two heifers, in calf by the prize bull Meteor; also, a superior bull calf got by Meteor, for sale at reasonable prices. Letters post paid will receive a prompt answer.

GEORGE VAIL.

Troy, 19th Oct., 1844.

AGRICULTURAL WORKS,

For sale by SAXTON & MILES, 205 Broadway, New York.

Clater and Youatt's Cattle Doctor, containing the causes, symptoms, and treatment of all the diseases incident to Oxen, Sheep, and Swine. Price 50 cents.

Dumas & Boussingault's Chemical and Physiological Balance of Nature. Price 50 cents.

The American Race Turf Register, Sportsman's Herald, and General Stud Book. By P. N. Edgar. Price $2.

Liebig's Agricultural and Animal Chemistry. Price 50 cts.

Liebig's Familiar Letters on Chemistry. Price 12½ cts.

Loudon's Encyclopædia of Agriculture, English. Price $10.

Loudon's Encyclopædia of Gardening. Price $10.

Bridgeman's Young Gardener's Assistant, new edition, much enlarged. Price $2.

The Farmer's Mine; being the most complete work on Manures ever published. Price 75 cts.

The Vegetable Kingdom, or Hand-Book of Plants. Price $1.

Youatt on the Horse; a new edition. Price $2.

The Complete Farmer, and Rural Economist, by Uhomas G. Fessenden. Price 75 cts.

The New American Orchardist, by Wm. Kenrick. Price 87½ cts.

The Honey Bee, its Natural History, &c., with 35 engravings. Price 31 cts.

Bees, Pigeons, Rabbits, and the Canary Bird, familiarly described. Price 50 cts.

The American Poultry Book; being a practical treatise on the management of Domestic Poultry. Price 35 cts.

A Treatise on Sheep, with the best means for their general management, improvement, &c.; by A. Blacklock. Price 50 cts.

The Theory of Horticulture; or an attempt to explain the principal operations of Gardening upon physiological principles; by John Lindley. Price $1,25.

Gardening for Ladies, and Companion to the Flower Garden, by Mrs. Loudon. Price $1,50.

The Farmer's Instructor; consisting of Essays, practical directions, and hints for the management of the Farm and the Garden. By J. Buel, 2 vols. Price $1.

A Muck Manual for Farmers; by Samuel L. Dana. Price 50 cts.

Chemistry Applied to Agriculture; by M. Le Comte Chaptal. Price 50 cts.

The AmericanGardener; by William Cobbett. Price 75 cts.

A Ureatise on the Vine; embracing its History, and a complete dissertation on the culture and management of Vine Yards; by Wm. R. Prince. Price $1,50.

The Farmer's Encyclopædia, and Dictionary of Rural Affairs; by Cuthbert W. Johnson. Adapted to the United States by Gouverneur Emerson. Price $4.

Cattle; their Breeds, Management, and Diseases. Price $2.

IN PRESS.

The American Poulterer's Companion, by Caleb N. Bement with numerous illustrations.

AGRICULTURAL AND BUSINESS AGENCY.

Knowing the convenience that such an agency will be to his distant friends, the subscriber offers his services for the purchase of Wagons, Carriages, Match and Single Horses, Cattle, Sheep, Swine, Agricultural Books and Implements, Seeds and Merchandise of any kind; also, the buying and selling of land, the payment of taxes, &c., &c.

From his long experience as a farmer and stock-breeder, and general acquaintance with lands and merchandise, the subscriber trusts that he shall be able to give general satisfaction. The commission charged for his services in purchasing or selling, will be moderate. Cash or produce must invariably be in hand before orders can be executed.

A. B. ALLEN, 205 Broadway, New York.

LINNÆAN BOTANIC GARDEN AND NURSERY—Late PRINCE'S.

FLUSHING, L. I., NEAR NEW YORK.

The new Descriptive and unrivalled Catalogue, not only of FRUIT, but also of ORNAMENTAL TREES, SHRUBS, and PLANTS, cultivated and for sale, *at reduced prices*, at this ancient and celebrated Nursery, (*the* IDENTICAL *premises known as* PRINCE'S, *and by the above title for nearly fifty years*,)

☞ With directions for their Culture,

may be had *gratis* on application by mail, *post paid*, to the NEW PROPRIETORS, who will endeavor to merit the CONFIDENCE and PATRONAGE of the Public, by INTEGRITY and LIBERALITY in dealing, and MODERATION in charges.

WINTER & Co., Proprietors.

Flushing, Aug. 31, 1844.

AGENTS FOR THE AMERICAN AGRICULTURIST.

Israel E. James is our agent for the Southern and South Western States and Florida, assisted by James K. Whipple, Wm. H Weld, O H. P. Stem, John B. Weld, B. B. Hussey, and Allen E. Brooks.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 miles, without the State.

ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume I. and II. of THE AMERICAN AGRICULTURIST, with tables of contents complete, for sale at $1,00 each; elegantly bound in cloth, $1,25. These are handsome, tasteful books, and make very desirable premiums for distribution with Agricultural Societies, and should also find place in all our District School Libraries. They constitute the best and most complete treatise on American farming, stock-breeding, and horticulture, extant. When several copies are ordered, a liberal discount will be made.

Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway. New York.

LANDSCAPE GARDENING.

Now ready, the second edition, enlarged and improved, of a treatise on the theory and practice of Landscape Gardening. adapted to North America; with a view of the improvement of country residences. By J. A. Downing, Esq. One thick volume, 8vo., beautifully illustrated, $3 50. In the present edition, a large part of the first portion of the work has been re-written—some modification of the principles of the art have been introduced—considerable new matter has been added—the whole has been revised, and newly and more copiously illustrated, from examples now existing in this country; and the work is now offered in a much more complete form than it was heretofore possible to present it. Published and for sale by

WILEY & PUTNAM, 161 Broadway.

CONTENTS OF NOVEMBER NUMBER.

	Page.
Arabian and Persian Horses, Blight in Pear Trees,	321
Sketches of the West, No. 6, Observations to Planters,	322
American Plows in England,	323
Chemical Solution for Seeds, Disease in Potatoes, Odd Rows of Corn,	324
Nursery and Garden of Messrs. Winter & Co., The Oregon,	325
Seventeenth Annual Show of the American Institute,	326
Queens County Show,	327
Premature Births, Keeping Pumpkins, Fatting Animals, Prices of Fancy Poultry,	328
Miscellaneous,	329
Postage, Franking, &c., H., Agriculture in Scotland, John P. Norton,	330
Plant Lice Destroyed by Ladybirds, A Canadian Naturalist, Wool Growing, R. L. Allen,	331
Manure of Pigeons, Chas. H. Raymond,	333
Guano Manure, J. E. Teschemacher,	334
Gama and Bermuda Grass, Thomas Spaulding, " " " Thomas Affleck,	335
A Poultry House, Poulterer's Companion,	336
The Cotton Gin, M. W. Philips,	337
The Policy of American Farmers, R.,	338
Merino Sheep, L. F. Allen,	339
Sorrel and Sour Soils, Wm. Partridge, Dogs and Cats, Thomas Affleck, Dutch and Yankee Teams, A Buckeye,	340
Costly Fences, Putnam, Fine Cattle for the South, R. H. Hendrickson, Helps in Reading Agricultural Works, T.,	341
A Corn Sheller, Tussac Grass,	343
Lady Barrington, 3d, Hens, Q., Seeding Grass Lands in Georgia, W. M. S.,	344
The Locust Tree, A Subscriber, The New York State Agricultural Society,	345
Northern Calendar for November,	346
Foreign Agricultural News, Instructions for Using Guano, &c.,	347
Editor's Table, Agricultural Survey and Products, Profit of Growing Mustard Seed, Disease in Potatoes, &c.,	349
Review of the Market,	351

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most
noble employment of Man.—*Washington.*

VOL. III. NEW YORK, DECEMBER, 1844. NO. XII.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

TO OUR SUBSCRIBERS.

With this No. our Third Volume is brought to a close, and thus ends our editorial labors for the year 1844. It has been our study throughout to instruct and interest our readers, and how successful we have been in these endeavors we must leave for them to determine. The first number of Volume Fourth will be promptly issued on the 1st of January, 1845.

In continuing the American Agriculturist, we have few new pledges to give or promises to make, more, than it shall be conducted, as hitherto, with a single eye to the interests of the Farmer, Planter, Stock-Breeder, and Horticulturist, and the general advancement of agricultural science. We trust that we shall continue to be favored, as heretofore, by the contributions of our friends; for very much of the interest and usefulness of any agricultural periodical must depend mainly upon this. To many among the thousands who peruse this work, something new is continually developing itself, which would be of more or less value to the public if communicated in our columns. Let our readers bear in mind, that periodicals of this kind seek not to accomplish the selfish ends of a mere party, but the welfare of the whole community; and whatever zeal and energy is exerted in their behalf, must necessarily contribute to the public good.

The Northern and Southern Calendars being now complete in this volume, we shall publish regularly in our next, a Calendar for the South-west, written expressly for this journal, by that eminent agriculturist, the Hon. Adam Beatty of Kentucky. We shall also commence a Boys' Department, comprising about two pages per month, and if our friends will assist us in it, we shall be able to keep it up throughout the year, and thus render the work more acceptable to our youthful readers. We wish some one would volunteer to make us a Ladies' Department of the same amount of matter, for we feel totally inadequate to attempt anything of the kind—and yet the farmers' wives and daughters ought not to be neglected. In addition to the above, we shall be at greater expense than heretofore in illustrations of our work, designed expressly for it. We solicit sketches of anything new and useful in agriculture, which if not too expensive, we will get engraved and insert in our pages.

With these things in prospect before our readers, we trust that all subscriptions to the American Agriculturist will be promptly renewed. The terms, it will be recollected, are cash *in advance*, which is the only thing that enables the publishers to go on with this periodical at the very cheap rate they do. Single copies, $1; three copies, $2; eight copies, $5. This last is the trifling sum of only 5 cents per month, for a highly useful work to the farmer and general reader, of 384 pages, beautifully illustrated. Who is so poor or so indifferent that he will not contribute so small a sum for his own benefit, and the cause of agriculture? The first three volumes handsomely and uniformly bound, constantly on hand for sale at $1 25 each. We think every library incomplete without a set of the American Agriculturist.

CARE OF YOUNG STOCK.

The first winter for young stock is the most trying one of their lives, and extra care should always be given to them, especially in their feed. In addition to what they will eat of the finest and best of the hay, lambs and calves should have a few roots daily, except in very cold weather. In feeding them be careful not to give so many as to scour them. It may be well also to feed the lambs a gill each per day of beans, peas, oats, or corn, which are preferred in the order mentioned. For calves, shorts or bran is preferable to grain. Colts ought to have 2 quarts of oats per day, except occasionally changing this feed to 3 quarts of bran. Oil meal is most excellent food in small quantities for all sorts of stock, especially calves and pigs. It keeps the bowels free and healthy, and makes them eat their other food with a greater relish. For shelter, we prefer open sheds for young stock to close stables, except in very snowy weather. A roomy yard, well protected from winds, should always be attached for exercise, of which they are more fond than older animals, and it is more necessary for them. Another thing which is greatly disregarded; young stock ought always to be sheltered by themselves; they thus escape injury from those more grown, and have a fair chance at their food. Colts must not stand upon a plank floor, or indeed a hard footing of any kind, the first winter; if they do, it is apt to give them the ring-bone. Their pastern joints are disproportionably weak during the first year, which makes an elastic footing requisite for them.

REMEDY FOR ROT IN POTATOES.

A friend calling upon us a few days since, in the course of conversation gave us the following account of his method of saving his potatoes from the rot: During the last two years I have examined numerous potato fields, and invariably found the vines early in the season completely covered with a species of flea; at a late period the tops of the same vines appeared brown prematurely. On cutting them open I discovered a small insect, having numerous legs, and I think they sucked the sap which should have gone to the nourishment of the tubers, and the rot consequently ensued.

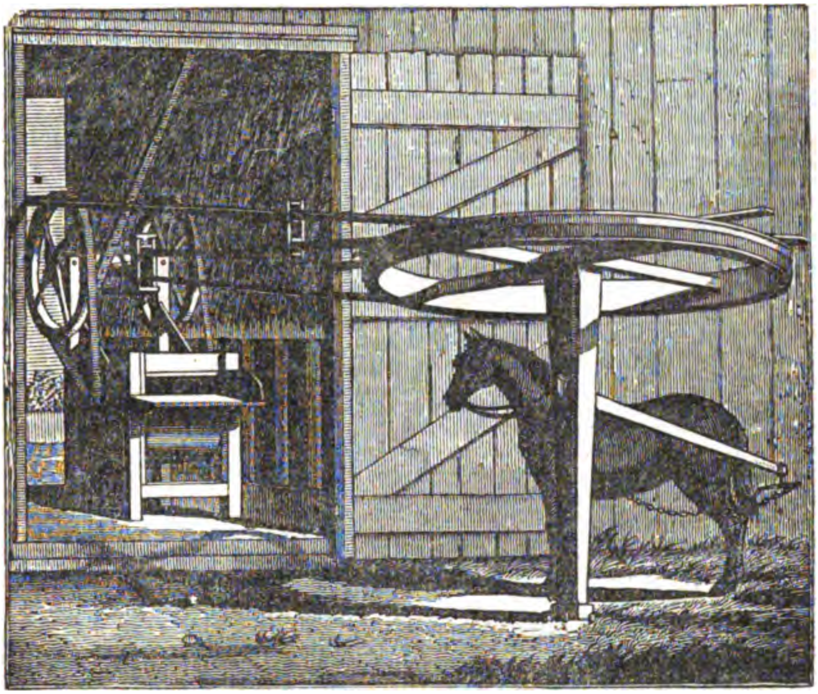
In the year 1843 I planted a field of several acres in drills, harrowed the ground level, and top dressed it with lime and charcoal dust. The yield was 432 bushels per acre; at the same time the potatoes throughout the neighborhood were decayed. This year I planted the same seed in the following manner: The ground was thrown into drills, and manured heavily; the potatoes were cut into sets of single eyes fourteen days before required for planting, and covered with plaster and lime; they were then placed in the drill, 9 inches apart, tops, centres, and ends separately, to mark the difference in growth; and each alternate three rows then covered with different substances, such as lime, sulphate of ammonia, silicate of potash, &c. When dug, they were all sound except a few rows on which nothing had been used but the manure, and these were decayed, although received only three weeks before planting directly from France. The only reason that I can give why my potatoes have escaped the rot is, that the above substances used in dressing them were offensive to the insect.

THE HAND FLOWER—Fig. 65.

The hand flower (*chiranthodendron pentadactylon*) is a native of Mexico. The trees which produce it are rare, and it is remarkable, says Mayer, principally for its brilliant tints, and the claw which protrudes from its thorny cup like that of a five-toed bird.

CHEAP HORSE-POWER.

We have been obligingly favored by one of the editors of the New York Central Farmer, with the cut below of a horse-power and thresher, and copy his description of the same from this work. Its cheapness and simplicity especially commend it to the south; we think where a light power only is wanted, that it would be as serviceable as any; and there is this further advantage in the machine, it can be made by the planters on their own premises.



CHEAP HORSE-POWER AND THRESHER.—FIG. 66.

"This horse power is the invention of Mr. John Shaw, of Augusta, Maine. It is nothing but a wheel and strap, consequently not liable to get disordered. The wheel we saw was only twelve feet in diameter; the shaft about eight feet long, standing in a post set firmly in the ground, which received a pivot from the end of the shaft. The upper part was supported by two braces, one end secured to the timbers of the barn, and the other crossing and receiving a gudgeon in the top of the shaft. The rim of the wheel was about six inches wide for the belt. A lever seven feet in length was let into the shaft, to which the horse was attached. The whole concern is very simple and well represented by the above cut.

"We have seen one of these powers in operation, for propelling a cutting machine, and it seemed to be well adapted for that purpose. As to its power for threshing, we have some doubts, unless two horses were attached. As the machine embraces no complicated gearing, but doing the whole with a wheel and strap, it certainly appears less liable to be put out of order; and what is a farther recommendation, we believe they can be erected at a less expense than any other machine.

"As it is much on the same principle as the common hoisting wheels used in storehouses, we would suggest that by cutting a groove or inserting crotched irons in the rim of the wheel, a rope may be substituted in place of the strap, by which a saving may be made, and possibly work as well. It is so simple that any carpenter or ingenious hand on the farm may construct one."

IMPROVEMENTS IN SUGAR-MAKING.

WE find in some of the late numbers of Simmonds' Colonial Magazine, that a patent has been taken out for the application of hydraulic pressure in extracting the juice from the cane. Two presses, each capable of bearing a strain of 1,400 tons, are worked alternately by one set of pumps, which pumps may be worked either by manual labor, by means of double-ended lever handles, or, where manual labor is scarce, by two mules, or by a small steam-engine of two-horse power. These presses are calculated to turn out about 6,000 gallons of cane juice per day of ten hours, which is more than can be effected by a roller-mill, even when driven by a steam-engine of twelve or fourteen horse power.

The advantages of this system of hydraulic pressure are stated to be: 1. The juice in the cane (generally 18 per cent. by weight of saccharine matter) can be wholly extracted, thereby saving about eight parts now left in the megass. 2. The juice can be rapidly filtered when cold as discharged from the mill, or hydraulic-press; if by the latter it should be needful. 3. The tempering can be effected properly and uniformly. 4. The juice can be defecated promptly as it runs from the mill, hydraulic-press, or filter, thereby avoiding the deteriorating effects produced by remaining in receivers. 5. The cleansing and evaporating of the defecated liquor (rendered purer by previous operations) can be effected in steam-pans, without discharging from one into the other. 6. The evaporated syrup may be decolored and filtered through animal charcoal, which can be revivified on the estate. 7. The final concentration of the syrup can be more rapidly accomplished than by the present mode, in an open pan or teache, at the low temperature of 170° to 180° Fahrenheit, or at about 80° to 100° below the usual temperature of the strike when boiled by the common method. 8. The concentrated mass can be properly crystallised and effectually cured, and the potting avoided by the use of vessels into which the strikes are discharged consecutively, and the sugar so cured will not drain during the voyage. 9. The molasses can be converted into sugar nearly equal to that of the first production; and sugar can also be made of quality in all respects as muscovado (and by this peculiar method only) from the molasses that drain from the sugar of the second quality. 10. The megass may be used for manure, if the various operations are performed by the agency of steam. 11. The machinery, apparatus, &c., are simple in their construction and management, and much less costly than others.

PREMIUMS

Awarded at the Seventeenth Annual Show and Fair of the American Institute, October, 1844.

Horses.

Stallions.—A. Redewald, New York, for the best stud horse—silver cup, $15. Samuel Mott, Jamaica, L. I., for the second best stud horse (rising Sun)—silver medal. William Salisbury, Catskill, Green Co., N. Y., for a stud horse (Diomed)—diploma. John Jackson, for a bay horse (Membrino)—diploma. Jesse Vliet, New York, for a bay horse (Young Top Gallant)—diploma. Ezrahiah Wetmore, Rye, N. Y., for a stud horse (Marshal Ney)—diploma. Edward Harris, N. J., for the Norman horse (Diligence)—silver medal.

Brood Mares.—Albert Emmons, Flatlands, N. Y., for the best brood mare, silver cup, $15. Henry I. Seaman, Staten Island, for the second best brood mare—silver medal. John S. Roulston, New York, for the black mare (Lady of the Lake)—diploma.

Colts.—George M. Patchen, Brooklyn, for the best colt—silver cup, $8. Anthony Davison, Rockland, Queens Co., N. Y., for a sorrel colt—diploma. Shepherd Knapp, N. Y., for a well matched pair of carriage horses—silver medal. Ray Tompkins, Westchester Co., N. Y., for a pair of horses—diploma.

Mules.

Abraham Van Siclen, Jamaica, L. I., for the best pair of mules—silver cup, $10. Joseph Drake, De Kay, New York, for the best jenny (Kit)—diploma.

Improved Breeds of Cattle.

Bulls two years old and upward.—George M. Woolsey, Hell Gate, N. Y., for the best Durham bull (Jupiter)—silver cup, $15. Robert Bolton, jr., Eastchester, N. Y., for the best Devon bull (Dudley) silver cup, $15.

Bulls one year old and upward.—Thomas Oliver, Riversdale, N. Y., for the best Durham yearling bull (Marius)—silver cup, $10.

Bull Calves.—Wm. Whiting, Morristown, N. J., for the best Durham bull calf—silver medal.

Cows.—Thos. Bell, Randall's Island, for the best Durham cow (Shakeress)—silver cup, $15. R. S. Griswold, Lyme, Conn., for the best Ayreshire cow (Lady Rose)—silver cup, $16.

Heifers.—Thomas Bell, Randall's Island, for the best Durham heifer—silver cup, $8. Robert Bolton, Jr., Eastchester, N. Y., for the best Devon heifer—silver cup, $8. R. S. Griswold, Lyme, Conn., for the best Ayreshire heifer—silver cup, $8.

Native Cattle.

Thomas Bell, Randall's Island, for the best native bull (Alderman)—silver cup, $15. James Patton, New Windsor, N. Y., for the best bull calf—silver medal. Joseph Clowes, Jersey City, for the best native cow—silver cup, $10. Charles Bathgate, Jr., Morrisania, N. Y., for the second best native cow—silver medal. Joseph Clowes, Jersey City, for the best native heifer—silver medal. George Chesterman, Harlem, N. Y., for the best heifer calf—silver medal.

Working Cattle.

David Beecher, Huntingdon, Conn., for the best pair of working oxen—silver cup, $15, and an extra premium, $10. Eli Dickerman, Hamden, Conn., for the second best pair of working oxen—silver medal, and an extra premium, $10. John B. Davis, Derby, Conn., for a superior pair of working oxen—diploma, and an extra premium, $10. L. H. Wheaton, Madison, Conn., for a superior pair of working oxen—diploma, and an extra premium, $10. Josiah Purdy, Jr., Rye, Westchester Co., N. Y.; John Brewster, English Neighborhood, N. J.; Abner House, Bellevue, N. Y.; for five pair of working oxen—extra premium of $10 to each pair.

Sheep—Long Wools.

Charles Bathgate, Westchester Co., N. Y., for the best long wool buck (Leicester breed)—silver cup, $8. Thomas Bell, Randall's Island, for the best long wool ewe (Leicester breed)—silver cup, $8. John Brewster, English Neighborhood, N. J., for the best long wool lamb (Leicester breed)—silver medal. Obadiah Elliott, Middleham, N. J., for the best middle wool buck (Southdown)—silver cup, $8. John Beatty, Morris Co., N. J., for the best middle wool ewe (Bakewell)—silver cup, $8. Benjamin Florence, Mamaroneck, N. Y., for the best wether—silver cup, $8. Robert Bolton, Jr., Eastchester, N. Y., for a superior Southdown buck and four lambs—silver medal.

Swine.

Benjamin H. Hart, Poughkeepsie, for the best Berkshire boar—silver cup, $8. Myndert Van Schaick, New York, for the second best boar—diploma. William Burnham, New York, for the best sow (half Berkshire)—silver cup, $8. William McLinchy, Yorkville, for the second best sow—diploma. Elijah Ryder, Sing Sing, for the best shoat—silver medal. Samuel Love, New York, for two very fine fat hogs—silver medal.

Farms.

Jeremiah Johnson, Wallabout, L. I., for his market garden farm—silver medal. Thomas Bell, Randall's Island, N. Y. for his farm—silver medal.

Plowing.

John Rae, West Farms, Westchester Co., for the best plowing of one eighth of an acre (time, 30 minutes)—silver cup.

MANAGEMENT OF POULTRY.

Poultry are subject to a variety of diseases, but nearly all of a serious nature are attributable to the effects of climate or want of care or skill. Pip is caused by a want of clean water, or by drinking dirty water in dry weather. Cure—remove the white blister found upon the tongue, and wash it with warm vinegar and water—feeding the bird for a few days with soaked bran and lettuce, or cabbage chopped very fine.

Flux is cured by pills of the yolk of an egg boiled hard, mixed with bruised hemp seed, or boiled barley diluted with wine.

Costiveness, the reverse of the former, is cured by giving them beet root chopped fine or bran and water with a little honey mixed.

Vermin may be destroyed by fumigating the [illegible] with brimstone.

Scab and itch are cured by feeding them with moist bran.

Cramp is caused by cold and damp. When afflicted, the birds should not be allowed to roost out of doors, and the roost should be well secured and warm—rub the legs and feet with a little fresh butter.

Abscess frequently comes upon the rump, and is caused by heat of blood, or torpid stomach, which corrupts the mass of blood. Open the abscess and press out the matter. Feed them with chopped beet root or lettuce, with some bran mixed, moistened with honey, or molasses and water.

Fowls should not be allowed to roost in very large numbers together, but where great quantities are raised, they should be kept in flocks of not more than one hundred. They should be kept very cleanly.

Warmth, with freedom from damp, is the great secret in the care of fowls. Their food should be frequently changed, and green food often mixed with their meal, shorts, or bran. Indian meal and molasses and water will fatten poultry faster than any other food. Cinders should be sifted for them to roll in, which will free them from vermin, and they should never be without a supply of clean water for drinking.

Never give them warm or hot food, which causes them to become crop bound. Hemp and buckwheat, or wheat occasionally, are good stimulants.

So far as food is concerned, every farmer's wife throughout the country knows what is proper. One great danger arises from their voracity of appetite inducing them to eat too much of food too nutritious for their delicate digestive organs, whereby they become sickly, or what is commonly called crop bound. Simple as the remedy for this evil may appear, it is somewhat difficult to put in practice where large numbers are fed together.

As regards attention to cleanliness, and their other common wants, such as regularity of feeding, and an abundant supply of pure water, nothing need be said; they can scarcely live, certainly not flourish, without these necessary requirements being strictly attended to.

Under, however, the best management, and the greatest precautions used against their various ailments, many will perish. It is a truth, however, that almost all the diseases of poultry arise from atmospheric causes.

With respect to medical treatment, applied to the diseases of poultry, but little regarding its efficacy is known. The nostrums and mode of treatment adopted throughout the country, together with the greater part of what has been written upon the subject, is a farrago of nonsense and absurdity. If shelter, warmth, food, and cleanliness, congenial to their habits, will not preserve them in health, but little reliance can be placed upon medicine.

Great care is necessary to protect poultry from the ravages of the skunk, the muskrat, the fox, and other animals, who possess a taste so refined as to prefer chicken to coarser food. And to insure complete success on a large scale, suitable buildings should be provided.

A close room, which should be made to exclude the wintry frosts, and also admit the balmy breeze of summer, should be provided for the machines, and should be kept as an eccaleobion hall. From this hall passages should lead to other rooms less tight and substantial, and many of them provided with roosts. As the birds grow they should by degrees be moved along, until after six weeks, or thereabouts, they will have an open yard with roosting places under a shed. In this manner, by keeping them in flocks of one or two hundred, and changing their roosting places frequently, by keeping them clean, &c., there will be no difficulty in raising any number per annum, provided no old fowls are kept on the premises. With suitable conveniencies there will be less trouble in raising one hundred thousand a year, than in raising one hundred without them.

To a successful rearing, therefore, of a large number of birds by artificial means, the only required essentials are, a sufficient number of these machines; suitable buildings; warmth and protection from dampness; proper food; and a careful attention to cleanliness in all respects. An establishment so constructed and so conducted can not fail to pay an immense profit to its proprietor.

The best food for chickens until three or four days old is eggs, either stale or fresh, boiled hard and cut into very small pieces. After which, meal wet up, and hommony dry. As they grow older, the feed should be varied, and they should have more or less green food, like lettuce, cabbage, endive, &c., chopped fine, and mixed with their meal; and loppered milk and bonny-clabber is most excellent. Cold boiled potatoes, fresh meat, crusts of bread soaked, and many other things usually thrown to the pigs, are excellent and profitable food for all kinds of gallinaceous fowl.—MICKLE'S TREATISE ON POULTRY.

CULTURE OF MADDER.

THE quantity of madder consumed annually in the United States, and imported from abroad, is perfectly astonishing to those who have given no attention to the subject. Unfortunately, our public records do not give very exact information on the subject; but Mr. Ellsworth, as the nearest approximation he could obtain, gives the amount as *five thousand tons!* Estimating this at the low average price of ten cents per pound, it makes the round sum of *one million of dollars* paid annually to foreign countries for an article that can be produced as good and as cheap at home—paid, too, by a people loaded down with indebtedness, and disgraced by the forfeiture of plighted obligations!

The cultivation of madder has heretofore been represented as a tedious and laborious operation, requiring much care and skill, as well as outlay of capital. The directions have been mainly gathered from foreign works, detailing the methods practised by the plodding Dutch in Holland and Germany. These accounts have appeared so frightful to Americans, that none of them have dared to undertake the business; and Yankee enterprise and labor-saving ingenuity have never been exercised upon it.

It is true, the crop requires three or four years to arrive at maturity, and needs considerable labor and some knowledge; but the quantity of land it occupies, and the amount of labor it requires, is far less in proportion to the value of the crop than those of any other farm crop that can be named.

These assertions are fully corroborated by the experience of an enterprising American farmer, Mr. Joseph Swift, of Erie county, Ohio, who has been engaged in the culture of madder for five years past. After having informed himself on the subject, and becoming satisfied that the business was practicable and profitable, he at once planted *nine acres*—a quantity that would astonish Mynheer Van Hollander. This he allowed to grow four seasons, and the crop was harvested and sold in the fall of 1842. The following are some of the results of his experience. The *product* of his best land was at the rate of 2,000 lbs. per acre; and he is certain that, with his present knowledge, he can obtain 3,000 lbs. per acre—which is more than the best average crops of Holland or Germany. The *quality* was superior to the average of imported madder.

Amount, Cost, and Value of Product.—The labor required, including the whole time, with the digging, cleaning, threshing, &c., was from eighty to one hundred days' work per acre. The outlay for buildings, fixtures, &c., did not exceed, in all, fifty dollars. The value of the crop was at the rate of fifteen cents per pound, at which price he sold most of it—notwithstanding the circumstance of its being unknown to purchasers, and all the prejudice that usually exists in such cases. The result, then, in figures, fairly stated, stands thus, for an acre of good land properly managed:

By 2,000 lbs. of madder, at 15 cts. per lb.		$300 00
Contra—To 100 days' work, mostly boys, at 75 cts. per day,	$75 00	
Use of land, 4 yrs., at $4 per year,	16 00	
Grinding, packing, &c.,	9 00	
		100 00
Leaving a net profit per acre of		$200 00

Mr. Swift was one of the earliest settlers of that section of the country, having resided nearly thirty years on the farm he now occupies, which consists of about 400 acres of choice land, mostly alluvial, in the valley of the Vermillion river, seven miles from Lake Erie. At my request, he furnished me with the following practical directions for the cultivation of madder, which he remarked must be understood as intended for those who wish to cultivate only a few acres, and can not afford much outlay of capital. Those who wish to engage in the business on an extensive scale, would need to adopt a somewhat different practice:

Soil and Preparation.—The soil should be a deep, rich, sandy loam, free from weeds, roots, stones, &c., and containing a good portion of vegetable earth. Alluvial bottom land is the most suitable; but it must not be wet. If old upland is used, it should receive a heavy coating of vegetable earth, (from decayed wood and leaves.) The land should be plowed very deep in the fall, and early in the spring apply about one hundred loads of well rotted manure per acre, spread evenly, and plowed in deeply; then harrow till quite fine and free from lumps. Next, plow the land into beds four feet wide, leaving alleys between, three feet wide, then harrow the beds with a fine light harrow, or rake them by hand so as to leave them smooth, and even with the alleys; they are then ready for planting.

Preparing Sets and Planting.—Madder sets, or seed roots, are best selected when the crop is dug in the fall. The horizontal uppermost roots (with eyes) are the kind to be used; these should be separated from the bottom roots, and buried in sand, in a cellar or pit. If not done in the fall, the sets may be dug early in the spring, before they begin to sprout. They should be cut or broken into pieces, containing from two to five eyes each; *i. e.* three to four inches long. The time for planting is as early in spring as the ground can be got in good order, and severe frosts are over, which, in this climate, is usually about the middle of April. With the beds prepared as directed, stretch a line lengthwise the bed, and with the corner of a hoe make a drill two inches deep along each edge and down the middle, so as to give three rows to each bed, about two feet apart. Into these drills drop the sets, ten inches apart, covering them two inches deep. Eight or ten bushels of sets are requisite for an acre.

After Culture.—As soon as the madder plants can be seen, the ground should be carefully hoed, so as to destroy the weeds and not injure the plants; and the hoeing and weeding must be repeated as often as weeds make their appearance. If any of the sets have failed to grow, the vacancies should be filled by taking up parts of the strongest roots and transplanting them; this is best done in June. As soon as the madder plants are ten or twelve inches high, the tops are to be bent down on to the surface of the ground, and all except the tip end, covered with earth shoveled from the middle of the alleys. Bend the shoots outward and inward, in every direction, so as in time to fill all the vacant space on the beds, and about one foot on each side. After the first time covering, repeat the weeding when necessary, and run a single horse plow through the alleys several times to keep the earth clean and mellow. As soon as the plants again become ten or twelve inches high, bend down and cover them as before, repeating the operation as often as necessary, which is commonly three times the first season. The last time may be as late as September, or later if no frosts occur. By covering the tops in this manner, they change to roots, and the design is to fill the ground as full of roots as possible. When the vacant spaces are all full, there will be but little chance for weeds to grow; but all that appear must be pulled out.

The second year.—Keep the beds free from weeds; plow the alleys and cover the tops, as before directed, two or three times during the season. The alleys will now form deep and narrow ditches, and if it becomes difficult to obtain good earth for covering the tops, that operation may be omitted after the second time this season. Care should be taken, when covering the tops, to keep the edges of the beds as high as the middle; otherwise the water from heavy showers will run off, and the crop suffer from drought.

The third year.—Very little labor or attention is required. The plants will now cover the whole ground. If any weeds are seen, they must be pulled out; otherwise their roots will cause trouble when harvesting the madder. The crop is sometimes dug the third year; and if the soil and cultivation have been good, and the seasons warm and favorable, the madder will be of good quality; but generally, it is much better in quality, and more in quantity, when left until the fourth year.

Digging and Harvesting.—This should be done between the 20th of August and the 20th of September. Take a sharp shovel or shovels, and cut off and remove the tops with half an inch of the surface of the earth; then take a plow of the largest size, with a sharp coulter and a double team, and plow a furrow outward, beam deep, around the edge of the bed; stir the earth with forks, and carefully pick-out all the roots, removing the earth from the bottom of the furrow; then plow another furrow beam-deep, as before, and pick over and remove the earth in the same manner; thus proceeding until the whole is completed.

Washing and Drying.—As soon as possible after digging, take the roots to some running stream to be washed. If there is no running stream convenient, it can be done at a pump. Take large, round sieves, 2½ or 3 feet in diameter, with the wire about as fine as wheat sieves; or if these can not be had, get from a hardware store sufficient screen-wire of the right fineness, and make frames or boxes about two and a half feet long and the width of the wire, on the bottom of which nail the wire. In these sieves or boxes, put half a bushel of roots at a time and stir them about in the water, pulling the bunches apart so as to wash them clean; then, having a platform at hand, lay them on it to dry. (To make the platform, take two or three common boards, so as to be about four feet in width, and nail cleets across the under side.) On these spread the roots about two inches thick for drying in the sun. Carry the platforms to a convenient place, not far from the house, and place them side by side, in rows east and west, and with their ends north and south, leaving room to walk between the rows. Elevate the south ends of the platforms about eighteen inches, and the north ends about six inches from the ground, putting poles or sticks to support them—this will greatly facilitate drying. After the second or third day drying, the madder must be protected from the dews at night, and from rain, by placing the platforms one upon another to a convenient height, and covering the uppermost one with boards. Spread them out again in the morning, or as soon as the danger is over. Five or six days of ordinarily fine weather will dry the madder sufficiently, when it may be put away till it is convenient to kiln-dry and grind it.

Kiln-drying.—The size and mode of constructing the kiln may be varied to suit circumstances. The following is a very cheap plan, and sufficient to dry one ton of roots at a time. Place four strong posts in the ground, twelve feet apart one way, and eighteen the other; the front two fourteen feet high, and the others eighteen; put girts across the bottom, middle and top; and nail boards perpendicularly on the outside as for a common barn. The boards must be well-seasoned, and all cracks or holes should be plastered or otherwise stopped up. Make a shed-roof of common boards. In the inside, put upright standards about five feet apart, with cross-pieces, to support the scaffolding. The first cross-pieces to be four feet from the floor; the next two feet higher, and so on to the top. On these cross-pieces, lay small poles about six feet long and two inches thick, four or five inches apart. On these scaffolds the madder is to be spread nine inches thick. A floor is laid at the bottom, to keep all dry and clean. When the kiln is filled, take six or eight small kettles or hand-furnaces, and place them four or five feet apart on the floor, (first securing it from fire with bricks or stones,) and make fires in them with charcoal, being careful not to make any of the fires so large as to scorch the madder over them. A person must be in constant attendance to watch and replenish the fires. The heat will ascend through the whole, and in ten or twelve hours it will all be sufficiently dried, which is known by its becoming brittle like pipe stems.

Breaking and Grinding.—Immediately after being dried, the madder must be taken to the barn and threshed with flails, or broken by machinery, (a mill might easily be constructed for this purpose,) so that it will feed in a common grist-mill. If it is not broken and ground immediately, it will gather dampness so as to prevent its grinding freely. Any common grist-mill can grind madder properly. When ground finely it is fit for use, and may be packed in barrels like flour for market.

If any person desires instruction for making several qualities of madder, or further information respecting any other point, it may be obtained by addressing, post-paid, Joseph Swift, Birmingham, Erie county, Ohio.

M. B. BATEHAM.

The above article is taken from the Transactions of the New York State Agricultural Society, and shows how easily madder can be cultivated. If Mr. Swift be not too sanguine in his calculations, it is certainly a very profitable crop. We ought not to import a single pound four years hence, and need not, if our farmers will take hold of the business as they ought to, as low as other agricultural products are. For a series of valuable articles on this subject, from the pen of one of our own correspondents, Mr. Partridge, see vol. ii., pp. 53, 77, and 115 of American Agriculturist.

ARE ROTATIONS OF CROPS NECESSARY?

They are, in many instances, a convenient and economical system of farming, but in none are they absolutely essential to successful cultivation.

Chemical analysis in regard to plants, has advanced thus far in its investigation, that it has placed within our knowledge, beyond the possibility of doubt or contradiction, *all the elements* that are necessary to their perfect development. We can now, by the aid of this subtle science, take to pieces the several portions of a plant, as the mechanic or builder can separate the different parts of his machine or building, and assort and measure them, and estimate the exact proportions which are essential to its perfection; while even a superficial acquaintance with botany and practical farming, enables us to determine what are the necessary requisites to their reformation under the controlling influence of nature. Whatever substances have not been formed under the laws of vitality, may not only be separated, but recombined by the man of science; but wherever the mysterious principle of *life* has once impressed its seal, no art of man can imitate the operation. The Deity has chosen to limit the successful efforts of human investigation on the very threshold of his own peculiar sphere. "Thus far—and no farther," is the incontrovertible fiat, to which the highest intelligence, when under the control of reason, will find its duty equally with its interests to consist. The study of Nature's laws, not the imitation of her vital operations, is the legitimate object of finite intelligence. Happily, we have, within the well-defined limits of human research, depths enough to fathom and explore, to busy the profoundest intellect while hemmed in by this mould of clay; and it is a pleasing and should be a satisfactory consideration, that those pursuits, which contribute to the melioration of our present condition, and most effectually minister to the wants of humanity, are among the most useful and attractive, as they are among the most recondite studies that can occupy the mind of genius. But we are wandering. If we ascertain the exact quantity of each constituent of the soil extracted by any given crop, which is always susceptible of estimate, we know precisely what is essential to be added to enable it again to yield a similar one. It was customary among many of the ancients, and especially the Greeks and Romans, to raise the same crops on the same ground for successive generations, a practice which has descended to the best agriculturists, even to within a few years. But this management required the adoption of the wasteful fallow system, by which, generally, every alternate year was required for the soil so far to recover itself as to be enabled to renew its accustomed yield. The present generation of enlightened farmers adopt the wiser and more economical method of rotation, which, without any waste of time or season, insures the same result.

The rationale of the fallow system is, that any given crop takes from the soil certain of its fixed or mineral constituents, as potash, soda, lime, the silicates, phosphates, &c.; and that these exist only to a limited extent, even in the most fertile soils, in a condition to be taken up by the growing plant; that is, that although there may be one hundred, or one thousand times as much of each as is required for immediate use, yet they may be so combined with each other, as not to be available for the same species of crop, except at intervals of one, two, or more years. By allowing the land a rest, as in fallow, the chemical action of the atmosphere, and dews and rains upon the materials of the soil, liberates an additional quantity of them, sufficient for the supply of another crop, after a sufficient time, even without the aid of manure.

The substitution of a system of rotation for fallow, combines the same object with superior economy; for by alternating roots, the leguminosæ, clover, and the grasses with the white or grain crops, they appropriate from the soil the same materials in part, but in such different proportions as to be fully supplied with what is essential to them, while the former crop, if on the ground, might have been starved for the want of a single ingredient in sufficient quantity to give the plant full maturity. Some soils are found to sustain a much shorter rotation for grain than others, owing to the greater abundance of lime and silicate of potash, &c., contained in them. Thus, all volcanic soils, such as are found in the island of Sicily and the neighborhood of Vesuvius, afford, after a very short respite, sufficient pabulum, without the aid of manure, to furnish another crop; and from this cause, the former, from a period anterior to Roman history, has been called the granary of the Mediterranean. Such soils also, as are annually overflown by streams, bearing in their turbid waters, not only the organic manures, but are charged, in addition, with the inorganic, or salts in solution, which are plentifully deposited on the expanded surface, are thus rendered capable for ever of yielding abundant crops of grain. Such are the Nile and Ganges, whose banks, since the subsidence of Noah's flood, have borne large annual burthens of the same exhausting crops; and such, too, will prove the bottom-lands of American streams, which are submerged by annual freshets, highly charged with the same materials. A similar effect is measurably produced by irrigation, when the water is strongly impregnated with beneficial salts.

But in nearly all cases, however rich the soil when first subjected to tillage, an annual supply of the salts or inorganic matter equivalent to what is abstracted from the soil by crops, or drainage, (which last is frequently a large item, though little perceptible, except in its effects,) is necessary to be added, to maintain a high state of productiveness. A slow disintegration and solution of the earthy salts is constantly going on in soils subject to cultivation, which yield the crops a supply as fast as prepared. But some soils do not furnish all the constituents in sufficient quantities for the demand of the plants, some being deficient in lime, some in potash, some in soda, some in the phosphates, &c. It would be well, and doubtless the most economical mode wherever attainable, to subject soils to analyses, and by learning its deficiencies, the right materials could be added without the expense of applying various items, some of which, might, for the time, be entirely superfluous; and where an analysis could not be conveniently made, experiments on a small scale, even on a single rod, might give the desired information.

There is no doubt, that while every substance found in a plant is equally necessary to its perfection in all cases, (after providing for the few instances of *substitution* in some of them, as of soda for potash, and the like,) yet there is not an equal necessity for their being found in the soil. Thus, while the mineral or earthy portion of plants (although usually constituting about one fortieth of the whole) are indispensable to plants, and can not be obtained by them unless in the soil and within reach of the roots; yet the organic, as carbon, oxygen, hydrogen, and nitrogen, may be, and unquestionably are, drawn in large quantity from the atmosphere and rains and dews, and this effect is generally in proportion to the judicious arrangement and proper combination of the inorganic materials of the soil. Experiments have proved this position beyond cavil, as an artificial soil, formed of pure silicious sand, with the sole addition of the mineral ingredients of the plant, with a supply of air and water, has been found entirely adequate to mature it. But at the same time that we may readily acknowledge the success of such experiments, and are aware from numerous observations, that the atmosphere is the ever-abundant storehouse for the supply of a large portion of the substances of plants, experience teaches us with equal certainty, that the addition of these materials to the soils in putrescent and other manures, muck, &c., is of the highest advantage to the speedy maturity and fullest development of vegetables, and consequently it is of the greatest interest to the farmer that they be adequately furnished to the plant in the soil.

When the proper measure of fertility is acquired for any given crop, we see no reason, and can conceive of none, why the same process of cultivation, the same quality of seed, and the same or equally favorable seasons, should not produce an equal amount of crop, *provided the same materials, and in equal proportions, which furnished the last, are again intimately blended with the soil.* We might then open an account current with a field, and charge all the materials added, and credit the *ultimate constituents* of the crop taken off, adding sufficient for drainage, and, if necessary, the escape by evaporation, and we should always be sure of sustaining the full measure of its highest condition of fertility, *and this, too, for any one crop, a thousand times successively repeated.* We can see, indeed, a remote exception to this rule, in a soil so long cultivated, that its *mechanical structure* has become so altered by constant tillage, and the coarser particles of the soil, having become so thoroughly comminuted or broken down by the chemical action of the roots of vegetation and their disposing influences upon the various materials constituting the soils, that it would be necessary to add portions of a less constantly cultivated foreign soil, or what is always at hand, and generally, perfectly adapted to the purpose, the subsoil lying directly beneath. It has been found necessary, in parts of Europe, which have been subjected to a close tillage for ages, to adopt this system, even when the supersoil was fully supplied with every element of fertility, and the effect has been immediate and peculiarly striking.

The practice of constant cropping with the same species of vegetation, may, it is true, in many cases, be attended with peculiar objections. Such are the nourishing of such insects, worms, or grubs, as are destructive of the crop, by constantly furnishing them food of a kind adapted to their most successful growth and productiveness; or the increase of weeds, which the necessary mode of cultivation will not readily admit of exterminating. In these cases, an occasional change of crop, may not only be the most economical, but the most effectual mode of eradicating its enemies.

An objection has been frequently made to continued cropping of a single species of vegetation, from the fancied theory of *prejudicial excretions* of the roots, a theory advanced and ingeniously supported by Decandolle, but which the closest scrutiny, of the most able and scientific observers since, has failed to establish, and it is confidently believed no difficulty may be apprehended from this cause.

It may, and doubtless is, beneficial in many, and perhaps all cases, that some additional material be added to the soil beyond what is taken off in the crop, or otherwise escapes. Such are lime and gypsum, which, in addition to the food they yield directly to plants, serve an important office in drawing the organic materials from the atmosphere, and combining with them, in which condition they are retained for the growing plant; and they are useful, also in predisposing such chemical action in the constituents of soils, as will most effectually subserve the great objects desired. Such, too, has charcoal been found, in hoarding up carbonic acid and ammonia for plants, though yielding no perceptible portion of itself to the soil or plant. Lime, also, is frequently absolutely essential in neutralizing deleterious vegetable acids, and mineral carbonates and oxides existing in the soil. An additional quantity of some of the materials requisite to the perfection of a crop may be necessary, from inability in a single season to mix them intimately with all parts of the soil, so that not only every root, but every fibre and spongiole shall be able to drink in a full supply of its appropriate nutriment, that no time be lost in maturing and giving the fullest perfection to the plant. An excess of some of the materials beyond what may be required for present use, therefore, if not so great as to be positively injurious, will, in many cases, be found indispensable to the greatest success; and this excess need be attended with no further loss than the interest of the outlay till it becomes sufficiently blended with the mass to yield itself up to the constant demands of the plant.

These conditions being fully considered and provided for, we believe a thousand successive crops may be taken from the same field without impoverishment or diminution. Such a practice may not be attended with any peculiar advantage with the majority of farmers; but would be eminently beneficial with many. Such as have arable lands near home, and remote pasturage adapted to their wants, would save a large annual expense in hauling their manures, and the waste of time in going a considerable distance to attend to the planting, cultivation and ingathering of the crops. Such also as have but a small portion of their land suited to easy cultivation, all of which may be kept constantly under profitable tillage, while all the remainder of the farm, may be rough, rocky, or steep hills, would find great advantage in confining their operations to the same fields. And all who have lands at high prices, where interest and taxes are large items in their accounts, would find it to consist with the greatest economy, to adopt a system of soiling, by which an acre of land contiguous to their stables and yards, would produce from two to five or six times the quantity of food for their cattle, now yielded by their light pastures, and it would cost but a trifling addition, in any instance, to the expense of cutting and feeding, while in some cases, there would be positive economy, in the labor of twice daily driving cows and working animals to remote fields to gather their own food.

R. L. Allen.

Buffalo, August 20, 1844.

A PLOW FOR TURNING UNDER THE COW PEA.

Can not your ingenious mechanics add something to their breaking plows which will *cut* the stems or vines of the cow pea, so as to enable us to turn them completely under? They cover the ground to the depth of from 18 to 30 inches, the vines thickly interwoven. We can roll them flat, or tread them down with hogs; we can also draw the leaves and points of the vines under, with a chain, as you do in plowing in clover; but we still want a coulter that will *cut*, not *drag* the vines, which are of great length, and many of them as thick as your finger.

I have thought of several plans, and have been told that some northern mechanic made a machine for a planter in Louisiana—a plow with a pair of large shears attached, and worked by a wheel, in some way, within the plow. Who it was for, or who made it, or how it works, I know not. I would suggest, a wheel with a steel cutting edge, or a very sharp coulter, bolted on at a very obtuse angle with the point of the beam, as in the jumping-shovel plow. But in both cases, though we have no stones, I fear the cutting edge would not last, unless, indeed, the wheel was so arranged as to press against a surface of *rawhide*, sliding along under it, and under the vines. A pair of shears might be attached to the beam, the blades, as in sheep-shears, kept apart by a spring; the lower blade resting on the ground, with a one-sided wheel attached to its point, the irregular motion of which would work the shears. These for suggestions. We would object less to the *expense* of such an addition to the heavy plow, than to the extra weight, and aptitude to get out of order. Without such an addition we can never derive much benefit from the cow pea as a fertilizer, otherwise than by turning them under in the spring after they have been rendered brittle by the weather, and trodden in by the stock. I have now a coat of peas upon some of my land here, poor as it is, which no plow that I have ever seen could turn under, without some addition of the kind. We have the same difficulty to contend with in the very heavy crop of crab grass, which comes up all over our corn-fields during the long growing season we have after the corn crop is laid by. So thick, tall, and closely matted, is it, that *when dead*, it can not be turned under and covered by any plows we now have; and we have no time for plowing while it is yet green, making as much cotton as we now do.(*a*) It is customary, with a great many, to burn it off! I managed it pretty well last year, by having the furzy surface burnt off after a rain, before the body of grass had dried any. I am of opinion, however, that with Ruggles & Co.'s eagle plow, or Prouty & Mears' centre draft, I can bury it completely, by having a boy keep up with each plow, and clear the coulter with a stick, as the plow runs, or I may perhaps manage to clear it with a crooked iron rod, worked by the plowman by means of a cord.

Could the cotton planter be induced to *think* of such things, and be satisfied to make less cotton, he would quickly find that by turning over his corn-field in the fall, or early in the winter, and putting his cotton there next season, even if he adopted no other rotation, (manuring his corn, and planting peas there early,) he would find that one half to two thirds of the land now in cotton would produce more than he could gather within a reasonable time. He could then make money from his cattle, sheep, and hogs—could sell hay from his Bermuda meadows—raise all his supplies at home—make his own clothing, leather, shoes, implements, &c., and be at the end of each year a richer man, and leave his plantation to his children, rich in improvements, and with a soil unexhausted. Here we are making a crop this season that will, I fear, prevent any increase in the present low price of cotton, or at all events, but a trifling increase to what we had every right to expect from the great diminution occasioned by the flooding of the river lands. Had we made a moderate crop, our staple must have gone up again to a remunerating price.

Thomas Affleck.

Washington, Miss., Oct., 1844.

(*a*) We have consulted with several of our mechanics relative to Mr. Affleck's suggestions about a plow for turning in the cow-pea. Their answer is, if they were on the ground and could see the working of the plow, they might be able to do something, but at this distance they see little hope in the case. We think the crab grass might be more easily managed, by using a wide sod plow, something like those for paring, cutting the ground about three inches deep, and turning the sod flat over. But such an instrument would require at least four stout mules to move it, and so much force as this attached to a plow, is enough to frighten many planters of the upper country against the use of it. When on the rice plantations in Louisiana, we saw a heavy French plow, with three to four yoke of cattle attached to it, which turned the sod covered with rank thick weeds and grass, flat over, in a very perfect manner. The prairie or northern sod plow, we are persuaded would do the work as well, and much easier than the ungainly French plow. But with all these our correspondent is quite as familiar as ourselves, and much more capable of deciding as to their merits.

FRUIT AT THE SOUTH.

I PRESUME the idea must have originated here, that our country was unsuited to fruits; but that idea does even now exist to a greater or less extent, and consequently those who do attempt it make failure almost sure, and thus prove the hypothesis—at least to their satisfaction. But thanks to the inquiring age, the indomitable energy of some, and the light of agricultural periodicals, this matter is undergoing a vast change; and I hope, ere many years pass, that our whole country will be convinced that we have a fruit country, and that all of my countrymen will avail themselves of this great blessing. I look on fruits as peculiarly suited to our wants, and thinking as I do, I should be forced into the inference that our Creator had fallen short in his perfect work, if our climate was unsuited to the easy production of fruit.

In warm climates, fruit is conducive to health (ripe fruit, of course), and if we could have it of a good quality, and in abundance, I think the scourge of our land, *fever*, would be more under our control. In the first place, we all know that the bile formed in our system is secreted in greater abundance in summer than winter, and I think if we would use less food that has carbon as its principal constituent, that we should be exempt from at least much of this increased flow of bile. Fruit is an article of this description; and requiring less carbon to keep our system in operation in the summer, with a great desire for this article, fruit, I think that we could with marked benefit use it freely, and to a greater extent than our northern brethren. I do not desire to enter into the subject more fully; it has been trenched on by many, and only add, that it seems to me, the oxygen in the fruit will combine with carbon in the system, and pass off harmless. You will therefore conclude I regard fruit as conducive to health, which I do.

I put it, on another footing, as our pecuniary interest. All manner of stock will feed on fruit, and most of them will improve in condition: besides, it will act on them as on man as to health—prevent disease. What number of hogs an orchard of 20 acres of good peaches and plums would keep in excellent condition from 1st of May to 1st of September or October, I can not form an idea; but I know this much, that hogs in an orchard of the Chickasaw plum (common plum of all this region) will not come to call, and presume that they would readily come for corn if this fruit was not to their taste. I think that, acre for acre, the same land will feed as well as if in corn; for if the orchard be cultivated as I deem it should be, plowed once every spring, and left until the fruit ripens, it will produce quite a pasture of crab grass, which of itself will fatten stock. And yet another advantage, which is now no longer hypothetical; fruit is profitable to ship to New Orleans, and those who live within even 20 to 30 miles of the Mississippi river can make it profitable, though of course not so much so as if living nearer. I do not see any reason why we might not sell in New Orleans alone 200 to 500 barrels per day of choice peaches, beside a large quantity to the planters on the Mississippi, where steepage water prevents their growing peach and other standard trees, to say nothing of Upper Mississippi and its tributaries. Understand, we can ship excellent fruit by the middle of June, and some of the early varieties two weeks earlier—this is of peaches; our strawberries can be sent up and down early enough to pay us well, beside which, the travelling custom on the Mississippi river is immense. We have therefore three good reasons, if I am correct in the first; beside which I state the gratification of our own taste and that of our visiters, as well as the moral bearing. Who would think of offering his friend a glass, when he could place before him, from the 15th of May to the 1st of October, the strawberry, melon, and peach, in season, and apples and pears, &c., all winter?

That peaches will grow here to perfection, equal to any point in these United States, who will affirm to the contrary? If any be found so hardy, and will come here, I pledge my head to prove to him he errs, and will go no farther than Hatch's or Lambert's, or my friend Hebron, in Warren county. I have bought peaches in the Philadelphia market at 12½ cents each, and excellent they were. I was in that most delightful city for two years, and saw choice fruits of all kinds, and I do aver, I never saw there a finer peach than I can show on this place in August. There has been shipped in one day, at Vicksburg, for New Orleans, on one boat, 200 barrels of peaches; this proves something.

Many persons rely on seedlings, and will not be convinced by the sad experience of some of us. Mr. Hebron has planted out not less than 1,000 seedlings, and I presume in the last twelve years I have done the same. What are they worth, with all our trouble? Both of us have budded to the sprouts, or tender limbs of over 90 per cent. of our seedlings, I guess, intending to cut down the trees of three to five years old; this shows *our* estimate.

Too many plant fruit trees on worthless land, fit for nothing else. This might do if they would remove four to six feet square of the clay, full three feet deep, and fill up the hole with earth from virgin soil or the woodpile, and then run a subsoil plow eighteen inches deep. I have never elsewhere seen nectarines succeed as well as in this country; I think they do equally as well as the peach. The raspberry of several kinds is very excellent. Summer and fall apples and pears do full as well, so far as our limited experience proves anything. The only difficulty is, your winter fruits transplanted here, ripen too soon for us; but I think time and experience will remedy this in our rearing winter fruits to suit our latitude. The quince I never saw finer; several varieties of the plum do well, and do not fail in one year out of fifteen. The fine plums, cherries, and apricots, have not been tested sufficiently to say anything for or against them. Of the latter I know some few gentlemen who say there is no difficulty at all. The grape will unquestionably succeed admirably. Think of sticking a cutting twelve inches long into the ground, and no more preparation; and yet many cut grapes from such culture. The fig—go south of us for the best, but not north of us for better.

The cultivation of fruits has as yet in reality received no such attention as you northern folks describe. We dig a hole some fifteen to eighteen inches square, about a foot deep, make the roots adapt themselves to this size, plant sometimes deep and sometimes shallow, owing to ease of digging the hole, and let it grow or not! This is truly about the amount of labor in planting our fruit trees. There are exceptions, I know, but this is the plan. We then plant corn, or cotton, or grain' as it happens to suit, and grow our fruits. Is it any wonder that we have not the rich, luscious fruit of the north?

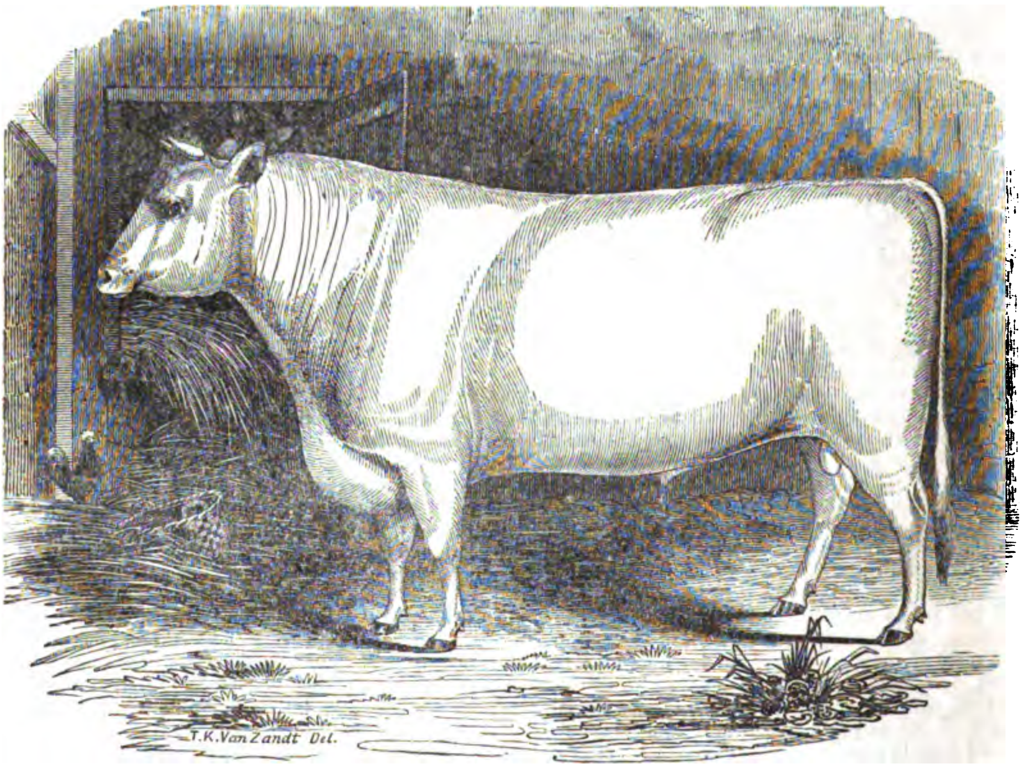
But we had better stop here, for I have said enough at this time, which I trust most earnestly, will induce some reader of yours to try the cultivation of choice fruits in a correct manner, and I do this with the firm belief that he will succeed, and if influenced to do so by this article, that he will feel thankful to the columns of the American Agriculturist for this advice.

M. W. Philips.

Edwards' Depot, Miss., Oct. 1, 1844.

N. B. We had frost here on the mornings of the 29th and 30th September. I have never known it so early before. Judge Noland, who has been here some thirty years, says it is the first frost in September he ever saw. The frost was plain, when the sun was an hour high.

DURHAM BULL METEOR.—Fig. 67


T.K.Van Zandt Del.

The Property of George Vail, Esq., Troy, N. Y.

In presenting the above portrait to our readers, we regret to say, that the artist has greatly misrepresented this fine animal, in giving him a dewlap, as he is particularly clean in this point. Nor is justice done to him at all in the brisket, he being very full, wide, and deep there. He has also become much thicker and heavier now than when this sketch was made, being then but 2 years and 5 months old.

Meteor was got by the Duke of Wellington, out of Duchess, both of which were bred by Thomas Bates, Esq., of England, and imported by Mr. Vail in 1840. He was dropped, if we recollect right, in July, 1841, and is of a pure white color, and a very superior animal. In September, 1843, he took the first prize as the best bull in the first class, at the Rensselaer County Agricultural show; October following he took the first prize at the cattle show of the American Institute in New York; and the present year at the exhibition of the State Agricultural Society at Poughkeepsie, he took the first prize of $20 as the best bull present of any breed, and another of $15 as the best 3 year old bull in the class of Durhams.

THE POLICY OF AMERICAN FARMERS—No. II.

In the adoption of a system for the better support of American agriculture, we deny and utterly discard the idea of any local, partial, or selfish policy. On the contrary, we believe, the just interests of that portion of the community whose claims we advocate, are identified with the prosperity of every other truly national pursuit, and inseparable from it. A flourishing commerce is essential to the transportation of such commodities as are either directly or indirectly derived from our soil. Successful manufactures are necessary to the consumption of our own products, *which can in no other way find a profitable market, and their fabrics are, in all cases, sooner or later, afforded to the consumer at a lower price and of a better quality than the foreign article, after they have, by a little timely aid from the protecting arm of government, been nurtured into maturity.* By a salutary division of labor, too, they direct from the tillage of the earth a portion of our citizens, who would otherwise overload the country with their products, and reduce them to a ruinous price. Merchants, being the factors of the agricultural class, are benefited in proportion to their prosperity; and nearly all the other professions and pursuits, deriving their support from them, are certain to be remunerated with a full share of their profits.

We look for the promotion of the farming interests to other sources than the depression of other pursuits. Our republican institutions can not be made to sustain any such policy, if we were disposed to adopt it. Our community is not parcelled out into distinct and unchangeable orders and classes, like the castes of the ancient Egyptians and modern Hindoos; or in the iron-bound system of feudalism of the middle ages; or like the present national arrangement of serf and noble in Russia and the eastern portion of modern Europe; or even like the hereditary orders and almost impassable barriers by which the policy of the English government, and the crushing weight of prescriptive public opinion has effectually hedged in the various crafts and professions of her citizens, and renders any change, unless under peculiarly favorable circumstances, next to impossible. On the other hand, we are a people, homogeneous for all purposes of occupation or employment. The lawyer of to-day is the merchant to-morrow, and a farmer the day after; the inheritor of thousands, by his ignorance or vices, finds himself, before middle age, stripped of his ancestral domains, and compelled to toil for a livelihood during the remainder of his life; while the poor and uneducated boy, by dint of industry, intelligence, and economy, rises rapidly through all the gradations of emolument and rank which the country and its institutions afford. Our republican condition has an absolute and ever-operating principle of equalization among the various parts which make up the mass; like the hydrostatic law, which compels the liquid in a series of vessels connected at their base, to part with just such a proportion of its fluid as will restore the exact level of the whole, when from any cause a quantity has been added to or substracted from either. But in the body politic this is a work of time, and frequently of great loss and inconvenience, and as the mass can not immediately change their pursuits, a just policy would seem to prescribe that every contemplated change of system in national affairs should be made with a reference to entire permanence in the end, and all practicable moderation in the means by which it is to be effected.

When changes in national pursuits are required, as they are in the progress of events, our statesmen should look with an enlightened forecast into the future, and determine what channels labor and capital shall pursue, with the greatest prospect of reward, and the least probability of interference hereafter. Vacillation in national affairs is the great bane to be feared in a republic where universal suffrage prevails, and it must be confessed, our own has given some signal examples of it. R.

SARATOGA FARMING.

A sojourn of some few months in the pleasant village of Saratoga, has enabled me to become somewhat acquainted with the agriculture of its neighborhood, and condition of its farmers. Believing it to be a district of which little is known of it, save its salubrity, its health-restoring, and pleasure-affording springs, I would wish to trouble you with a few remarks on other features, whose importance may be estimated rather at what they *should be* than what they are. To tell you that the soil hereabouts is commonly a sandy loam, resting, in some instances, on a retentive subsoil, and in others on a lime-stone, and still in others on rudely compacted concretions of granite, is, perhaps, sending "coals to Newcastle," or telling you what you know already. Let me proceed at once, therefore, to the cultivation of this soil and its productions.

The same ruinous rotation, if it be worthy the name, which marks generally the farming of the state, is found here flourishing in all the perfection and glory of its absurdity and ruination. Grass from two to six years, according to the tendency of the tiller's inclination to dispose it otherwise, or of the wild *mulleins* to hide from view his pigs and sheep; then follows a corn crop; then rye, or oats, followed sometimes by wheat laid down to grass again; but very frequently the land returns to grass with the rye or oats. Potatoes are grown sometimes after one crop, sometimes after another—they have no decided position in this *system*. As regards produce, it is as you may anticipate, fully in accordance with the rotation, poor enough to what it ought to be. Corn, 30 bushels per acre; wheat, 14 bushels; Oats, 50; and potatoes 150, are considered very good crops, upon a soil, which, with anything like judicious management, is, expense of cultivation considered, capable of being made the most profitable in creation. The principle of producing *something* with the least possible expense and trouble, may be seen illustrated hereabouts with all its beautiful consequences. Tumble-down fences, old cultivated fields, still capable of rendering a good return of non-extracted stumps, together with such a vigorous appearance among the weeds, as bids fair, at no distant day, to establish their complete supremacy in the vegetable kingdom.

The size of the farms varies from 50 to 150 acres each. The *occupiers*, or "abusers," being generally men from whom you would expect better things, for the most part, intelligent, well-informed men, who know better, but will not practise it; and all possessing that trait of character pervading so generally the agricultural community —hospitality. To the truth of this I am an excellent witness, inasmuch as in my botanical wanderings, I have frequently had occasion to prove its existence and its depth. Much allowance, however, must be made for this want of energy and enterprise among the sons of the soil in these parts. They have no good remunerating prices to repay them for their labor, and emulate them to improvement; for say what you will about a man's duty to improve, if dollars and cents are not the consequence, his patriotism may starve him; and *practically* speaking, this is a consummation which for personal reasons, will be rather avoided than desired.

In the season's zenith the farmer can get but 12½ cents per lb. for his butter, and about a cent each for his eggs, and 12½ cents for a chicken; and these, you know, are not prices to induce draining anything but the pockets, or subsoiling anything but one's patience. Then, if he is very lucky, he will get 50 cents per bushel for his corn, $1 for his wheat, and 25 cents for his oats. His potatoes he wants mostly for his stock during the winter, what he sells he gets 25 cents a bushel for. Now as far as the consumer is concerned, these prices are everything that could be wished, especially as regards the large hotel-keepers, who, charging $10 to $12 per week to the accounts of their boarders, can console themselves with the thought that the poor farmer's account will not interfere much with their immense profits.

But *all* is not so bad as my brief remarks would induce you to suppose. No; doubtless in looking over the contributions of your numberless correspondents, you find much that is too poor for your columns, (may the gods send me favor,) but now and then something that suits exactly. So with my "farming eye," I have seen much to disgust me, but one or two farms that suit me exactly. Among others I will name two; one about a mile east from the village, of about 130 acres, farmed in a masterly manner, by one James Stewart, a Scotchman; the other belonging to Mr. Root, 100 acres, situate in Galway, about 15 miles west; a gentleman keenly alive to the importance and profits of judicious improvement. The general neatness of everything about these two farms strikes the eye of every one at all observing, as he rides along the roads that border them. Mr. Root has squared his fields off with beautiful precision, subdrained where necessary, and broken up, by deep plowing, the hard pan which systematic idleness had formed beneath the surface soil. Everything about him bears the aspect of comfort and cheerfulness; the very grunt of the sleek porker grows musical as he smiles on his wholesome food. I am happy to say Mr. Root's good example is being followed in the neighborhood; and so with friend Stewart, 70 years of age, and still as willing to try useful improvement as when at the age of 50, he plowed the furrow among his native hills in Scotland. His farm is a perfect garden, it is so clean; his corn better planted than any of his neighbors; his land in good heart, and yielding him excellent ruta baga and beet root. And if he wants physic, a beautiful mineral spring in his low lot furnishes him with it, direct from Nature's store.

I could dwell with pleasure upon the minutiæ of the management of these two pattern farms, but dare not trespass on your columns for fear of being marked "not accepted." I must, however, allude to one other pleasing sign lately shown in the neighborhood, I mean the erection of a lime-kiln by Mr. Hoyt, and the result of a first burning just completed of 600 bushels of very superior lime. According to the analysis made by our friend, Dr. Gardner, the stone, from which the article is made, gives a return of 52 per cent. of pure lime. Two hundred bushels were disposed of in one week. This is no doubt an earnest of better things. You will doubtless join with me in wishing success to all such attempts at improvement.

Dendy Sharwood.

COMPOSITION OF SALERATUS.

In the article in the November No. p. 345, of the Albany Cultivator, C. D. asserts that saleratus is composed of sulphate of potash and pearlash. I am surprised at the writer falling into this error, for I presume every dealer in the article must know that saleratus is a supercarbonate of potash. Should it contain any sulphate it is an impurity. If sulphate of potash will answer as well as saleratus, it can be bought at nearly half the price.

I should notice another error on page 342; but as it originates with Liebig, whose opinions are at present by too many considered infallible, I shall refrain from any comment.

Wm. Partridge.

SUBSOIL PLOWING.

I made an attempt to considerable extent last year to trench my land, by running one plow after another, in the hollow of the previous year's ridges; and although I did not reach above ten to eleven inches at last, I thought in this very dry season, there was some marked improvement in retaining the fruit. My object in subsoiling it, is to penetrate eighteen inches, and to bring up a ferruginous sand and soil of a dark snuff color, which generally underlays the surface soil, of a white and coarser texture; I believe this under soil will supply some of the constituents that are wanting in the other. Many of our fields have had, as was previously stated to you in my letter on Sea-island cotton, great quantities of oyster-shells deposited by the extinct Indian tribes of the seacoast, and under these shelly lands will generally be found a gypsius sand still more valuable for mixture with the surface soil.

THOMAS SPALDING.

Sapelo Island, Geo., September 24, 1844.

IN answer to our call in the October No. of the Agriculturist, page 300, upon Messrs. Jewett and Randall for the pedigrees of Pedro, Fortune, &c., Mr. R. has given below, what we suppose is all that he thinks he has any concern in; but as the pedigrees of Pedro and the "*Simon Pure* flock of 400 Paulars" still remain untouched, we shall be obliged to Mr. Jewett to answer so far as regards these animals. We presume he has long had their pedigrees in hand, and as a certain portion of the public is very anxious to see them, we shall expect to be furnished with the matter in time for our next number.

PEDIGREES OF MR. RANDALL'S SHEEP.

IN your paper of October, you ask me and S. W. Jewett, Esq., of Vermont, to give you "the pedigree and breed of Mr. Jewett's rams Pedro and Fortune;" 2d, you ask *me* to inform you where the "pure Paulars in the U. S. in the hands of various individuals are to be found, of which I speak at page 25 of the Cultivator for 1844."

With your permission, I will first answer your second question. By turning to the communication of mine in the Cultivator, alluded to by you, you will perceive that I do not assert there are any Paulars in the United States, *on my own authority or knowledge*; 2d, that the assertion, let it be on whose authority it will, is but conditional and hypothetical. It amounts simply to the expression of an *opinion*, based on the supposed credibility of certain testimony, and, to equally enable others to judge of its validity, the nature and kind of that testimony is fully set forth in connexion with such expression. That testimony was "the assertions of honorable and veracious men."

I make this explanation, not because I have any doubts as to the fact involved, or my ability to prove that fact, but because having repeatedly expressed my disregard publicly and privately, for what I consider the fictitious importance attached to the "*Paular*" name, and having so repeatedly laughed at both the pros and the cons in what may be styled the "Paular War," I have no ambition now to be suddenly elevated to the rank of a leader or champion, in either of the belligerent forces; in other words, I would not constitute myself, or be constituted by others, one of the principal parties to a dispute which I regard as of little importance.

With this disclaimer, I have no objection to give a portion of the proofs (enough to establish the fact, in my judgment) on which I based my opinion. As those proofs will, incidentally, form a portion of my answer to your first inquiry, I will now pass to the consideration of that inquiry.

Let me premise, for a proper understanding of the subject by the reader, that since your first inquiry was made, you have, in compliance with my wishes, so varied it, that its scope, instead of being limited to *two* sheep, neither of which is owned by me, and one of which I never saw, now embraces the pedigrees of *my flock of Merinos*.

Not to unreasonably exceed the limits of this communication, I shall at this time call attention but to a single strain of blood in my flock. I have others, the purity of which I consider equally susceptible of proof, and which I *know* to be accompanied with equal *value*, in the individual, but I make choice of the one which, with one exception, includes the sheep on which I drew the first premium on Merino rams, and first and second premium on Merino ewes at the late Fair of the State Agricultural Society at Poughkeepsie, because these animals having been so publicly exhibited, their pedigrees may be a matter of more interest to many, than those of sheep never seen by them. Indeed, I should be exceedingly reluctant to take up the room in the columns of a public periodical, with *any* of my pedigrees, were it not that I conceive that they may borrow some interest, in the public mind, from the light which they throw on an important, and among those who have not particularly investigated the subject, a mooted question, viz., whether there are or are not now in the United States, pure-blooded descendants of the early Merino importations, beside those of Consul Jarvis, and of some few who hold from him.

Andrew Cock, of Flushing, Long Island, purchased imported Merino Sheep of Richard Crowninshield, and various other importers. In 1823, he sold his flock to Hon. Charles Rich, whom many will recollect as a former Member of Congress, from Vermont, and Leonard Bedell, both of Shoreham of that State. John T. and Charles Rich, sons of Charles Rich, senior, inherited their father's flock. John T. has kept his portion of it pure to the present day. Charles kept his pure for a period, but whether he has to the present day, or whether he retains them at all, I am not informed. Bedell kept his flock pure to the time of his death, at and shortly previous to which time, portions of it fell into the hands of various breeders, several of whom have preserved it pure to the present time. John T. Rich, S. W. Jewett, Gen. Jasper Barnum, M. C. W. Wright, and some other individuals, own descendants of the Cock flock, which have been preserved pure and unmixed, a portion of them from *any other blood*—a portion of them from any other blood excepting that of Consul Jarvis's importation, by the use of rams regularly attested by Consul Jarvis to be pure descendants of his imported Spanish sheep. The ewes of mine which received the State Society's first and second premiums at Poughkeepsie, were got by "Fortune," dams pure bred ewes of the Rich or Cock stock, owned by S. W. Jewett.

The following statement by the Hon. Effingham Lawrence, of Long Island, (who acted as Chairman of the fine wooled sheep committee at the 2d State Fair at Albany—who has owned, bred, and sold more pure bred Merinos, and possesses a greater knowledge of the early importation of them, than almost any other individual in the United States—) shows the kind of sheep possessed by Andrew Cock, his skill as a breeder, and his integrity as a man.

Judge Lawrence's Statement.—Yours is duly received, in which you refer to a conversation we had, on the subject of Merino sheep, and particularly of the quality and purity of the flock of Andrew Cock, who was my near neighbor. We were intimate, and commenced laying the foundations of our Merino flocks about the same time. I was present when he purchased most of his sheep, which was in 1811. He first purchased two ewes at $1,100 per head. They were very fine, and of the Escurial flock imported by Richard Crowninshield.

His next purchase was 30 of the Paular breed at from $50 to $100 per head. He continued to purchase of the different importations, until he run them up to about eighty, always selecting them with great care. This was the foundation of A. Cock's flock, nor did he ever purchase any but pure-blooded sheep to my knowledge or belief. Andrew Cock was an attentive breeder; saw well to his business; and was of unimpeachable character. His certificate of the kind and purity of blood I should implicitly rely on. I recollect of his selling sheep to Leonard Bedell of Vermont.

EFFINGHAM LAWRENCE.

Flushing, 1844.

—

Statement of John T. Rich, Esq.—I certify that my father Charles Rich, and Leonard Bedell, former residents of this town (now deceased), did on or about the year 1823, purchase the entire flock of sheep owned by Andrew Cock of Flushing, Long Island. Accompanying said sheep, Mr. Bedell brought a certificate that came with the sheep from Spain. I have read said certificate, which gave a full description of the sheep purchased in Spain, with guaranties of their purity of blood, which was regularly attested by the American consul then in the Spanish or Portuguese dominions. I thereby had satisfactory evidence that they were all of this importation, and that many of them brought to this town were the identical sheep imported. The certificate, I am confident, described them as from the Paular flock. The ewe that was the dam of Mr. Jewett's buck Fortune was a pure descendant of this imported flock above described. I have preserved this flock pure to this day, which amounts to more than five hundred. Some of the flock have been recently crossed by bucks of the importation of Consul Jarvis, which said bucks were purchased from the flock of, and regularly attested by, said Jarvis, as being pure Spanish Merinos.

JOHN T. RICH.

Shoreham, 1844.

—

Statement of Hon. S. H. Jennison (late Governor of Vermont).—I certify that I am personally and intimately acquainted with John T. Rich, of Shoreham, Vt., the signer of the above certificate, and that his statements are entitled to full credit.

I further certify that Leonard Bedell, late of Shoreham, deceased, was a near neighbor to me, and I recollect learning from him many years since of his purchase of the flock of Merino sheep, on Long Island, as stated by Mr. Rich. I have several times seen the certificate mentioned by Rich in the possession of the said Bedell. I have reason to believe the portion of the Long Island flock, purchased by the late Hon. Charles Rich, and now kept by John T. Rich, have been kept pure as he states. I was well acquainted with the portion of the flock kept by Bedell, having handled them on several occasions between 1824 and 1830. Some of the ewes in the flock were pointed out to me as imported ones, which were toothless and very old, between the dates above named. I have several times had bucks from the flock, and never entertained a doubt of their being pure bred Spanish Merinos. Mr. Bedell called them, and I thing the certificate named them as of the Paular breed.

S. H. JENISON.

Shoreham, 1844.

—

Charles A. Hurlbert's Statement.—I certify that I lived near neighbor to Leonard Bedell, in the town of Shoreham, Vt., in the year 1822, and that during that year Mr. Andrew Bedell drove a lot of sheep from Long Island, purchased of Andrew Cock.

From 1823 until the decease of Mr. Bedell, a period of fifteen years, I lived in his family and had the charge of his sheep. Mr. Bedell kept none other but full-blooded sheep of the Cock flock, and I was perfectly familiar with a number of them always asserted by him to have been originally imported. They had a distinctive mark, as such, had attested marks and rings of copper in their ears, and were very old.

Mr. Bedell also had the original Spanish certificate of their purity of blood, attested by the American consul. These sheep were preserved by Mr. Bedell entirely free from admixture with any other blood. Previous to his decease I selected about 80 of his ewes, which I afterward drove to Monkton, and finally disposed of to S. W. Jewett, of Weybridge. CHARLES A. HURLBERT.

Monkton, 1844.

—

Gen. Barnum's Statement.—I hereby certify that I was born and lived in the neighborhood of Mr. Leonard Bedell, during his residence in this town; that I well remember the flock of Spanish Merino sheep which he drove from Long Island 21 or 22 years ago; that I was familiarly acquainted with this flock of sheep until his decease in 1838, having assisted in shearing them every year during that time, with the exception of three or four. Mr. Bedell had a certificate of the lineage of the sheep from Spain, certifying their purity of blood, which I have several times read: and I am *confident* that it described them to be Paulars, from the flock of "Don Manuel de Godoy, Prince of Peace," &c. Mr. Bedell, though repeatedly urged to sell ewes, utterly refused, though offered high prices by myself and others: nor did he part with any until the last years of his life. I now live on the farm formerly owned and occupied by him, and possess a large portion of the above described flock. I am confident that it has not been crossed with Saxons or any other native breeds of sheep in this country.

JASPER BARNUM.

Shoreham, 1844.

Levi Rockwood's Statement.—I moved into the neighborhood of Leonard Bedell, late of Shoreham, Vt., in the spring of 1830, and soon became acquainted with his flock of Merino sheep. I have frequently heard him relate the history of his sheep. He said he purchased them of Andrew Cock, of Long Island, and that they were imported from the flock of Godoy, the Prince of Peace, in Spain, as their Spanish pedigree, in his possession, would show. He always called them Paular Merinos, and frequently boasted of this as being the best stock ever imported. I have heard him advised to cross the blood of his flock by using bucks from other Spanish flocks, but he insisted on keeping his pure, preferring, as he had done, to breed them in and in. I have seen the Spanish certificate which accompanied the sheep, but never read it.

LEVI ROCKWOOD.

Monkton, 1844.

—

Statement of Hon. Harvey Munsill (Judge of Probate).—I hereby certify that I am personally acquainted with the above named Levi Rockwood, and have been for a great number of years. I consider him a man of truth and veracity, and believe him to be so considered by the community at large. HARVEY MUNSILL.

Bristol, 1844.

Certificates to the same general effect with the above might be indefinitely multiplied, and the above would be promptly *turned into affidavits*, were there any occasion for such a step.

It will be observed that the sheep sold by Cock to Messrs. Rich and Bedell, were imported with a Spanish pedigree, attested to be genuine by one of our Consuls in the Spanish or Portuguese dominions.* This is distinctly asserted or confirmed in *every one* of the above certificates. This Spanish pedigree named them as Paulars, as appears by the testimony of all the witnesses save one, whose omission to mention the fact was doubtless casual or accidental; and Gen. Barnum distinctly recollects that they were stated to be from the flock of Manuel Godoy, Prince of Peace. Rockwood recollects with equal distinctness that Bedell was in the habit of asserting that the Spanish pedigree described them as from the flock of Godoy, at a time when that pedigree was in existence, and open to the inspection of any one. This personage was, until his effects were confiscated, the proprietor of the Paular flock. Gov. Jennison and Mr. Rockwood mention that Bedell was in the uniform habit of calling his sheep Paulars, and this was at a time when this name would probably have attached little, if any, additional value to them, in the minds of sheep-breeders. Judge Lawrence distinctly recollects that Cock purchased *thirty* Paulars at one time of the importer—more than one third of all the imported sheep ever purchased by him.

The original Spanish pedigree was delivered by Cock to Rich and Bedell, *as the pedigree of the sheep purchased by them.* That certificate described marks and certain rings in the ears, &c., which *corresponded with those borne by the sheep delivered.* Now if the sheep so delivered were not the identical sheep described in the Spanish pedigree, and their descendants, Andrew Cock must have *forged* their distinctive marks, in imitation of the genuine Spanish marks, and thus been guilty not only of gross fraud, but of what would clearly constitute the *crime* of *swindling*. Judge Lawrence's statement shows how far such a supposition is reconcilable to his character. We have it then proved by the best testimony which the case admits of, testimony which is entirely conclusive, that Cock sold and delivered to Messrs. Rich and Bedell, not only pure Merino sheep, but pure *Paular* Merino sheep.

The certificate of John T. Rich shows that the part of the flock inherited by him, has been reserved pure from its purchase of Cock down to the present day, (a few of them latterly having been crossed with rams of

---

* This original certificate is not now probably in existence. Bedell was in the habit of carrying it much about with him, and frequently exhibiting it. It was probably worn out, or lost.

Consul Jarvis' importation,) and now amounts to 500. It would have been an *insult* to this gentleman's high and unexceptionable character to have published the endorsement of it, contained in the certificate of his intimate friend Governor Jennison, were it not that his statements were to be read far from his native state and the circle of his acquaintance. That Bedell also preserved his flock pure from the time of its purchase to the time of his death, is proved by the individual who had charge of it during that entire period; by Bedell's successor on the farm, who was constantly acquainted with the flock, and assisted in shearing it 12 out of the 16 years during which B. lived after he purchased it; by Rockwood; and finally, by his near neighbor Gov. Jennison, who fully confirms the testimony, on this point, of all the other witnesses.

Beside the purchase of 80 ewes of the Cock stock by S. W. Jewett, alluded to in C. A. Hurlbert's certificate, I have lying before me the statements of various other purchases, by the same gentleman, from both the Bedell and Rich branch of the same stock, which it is not necessary to publish. Mr. Jewett's certificate of the pedigree, &c., of the ewes exhibited by me at the State Fair, is as follows:

WEYBRIDGE, ——, 1844.

I have this day sold Henry S. Randall, of Cortlandville, N. Y., for the sum of $200, eight yearling pure bred Spanish Merino ewes, being the choice of my entire flock. Said ewes were got by my buck Fortune, dams ewes of the Rich stock, and they have a half penny taken from the under side of the right ear. Their fleeces averaged five pounds of washed wool, and the four accompanying samples[*] were taken from four of them.

S. W. JEWETT.

The pedigree of Fortune's dam has been given in Mr. Rich's statement above; that of his sire is thus stated by his breeder:[†]

Statement of Tyler Stickney, Esq.—The ram which was the sire of Mr. Jewett's buck Fortune, I purchased of Consul Jarvis, of Weathersfield, in the year 1835. He sold the same to me for a pure Spanish Merino ram—ear mark [illegible] notch under each ear.

TYLER STICKNEY.

Middlebury, 1844.

No authentication of this statement is deemed necessary, as probably there is not a sheep-breeder within fifty miles of Middlebury, who is not perfectly conversant with the history of this wonderful ram.

The history of Consul Jarvis' importation, and his formal attestations of the purity of the rams sold by him, would unreasonably extend the limits of this communication, and probably they are not necessary, to the full substantiation of the pedigrees. He is yet alive; and the history of his importations will be found in a letter addressed to me in the first vol. of the Transactions of the N. Y. State Agricultural Society, page 320.

As I have already remarked, I have other strains of blood in my flock, some entirely distinct from the above, some a mixture between the above and other distinct strains. Their pedigrees are equally susceptible of proof with the above, and are *always open to inspection.* That the quality of some of these other strains is nothing inferior, in the estimation of others as well as myself, I recently had substantial proof in the sale of a young ram, partly one of these stocks, and partly of the above, at $300, and the opportunity of refusing $100 for a ram lamb of the same stamp.

Yours respectfully,
HENRY S. RANDALL.
Cortland Village, Nov., 1844.

NORTHERN CALENDAR FOR DECEMBER.

SETTLE all your accounts, collect what is due you, and pay what you owe. "Short settlements make long friends." Examine your farm statistics, and see what have been the results of your experiments with the different kinds of manures, seeds, modes of tillage, &c., &c., and note them well for future use. No farmer ought to be without such a book, in which all experiments should be carefully recorded at the time, and the results carried into a separate book for his own use hereafter; and if new and valuable discoveries are obtained, communicate them to some agricultural periodical for the benefit of the world. Recollect, you have the experience of thousands to guide your operations, and by contributing to the general stock whatever may be useful, you are but returning to mankind a part of the benefits you have derived from them. But avoid twaddle and humbuggry, and oft-published statements, and prolix or tedious narration, and give all the circumstances material to the subjects, in the briefest, plainest, simplest language possible. Above all things, send in your subscription to one or more valuable agricultural papers, and get as many of your neighbors to subscribe as possible, and consider in so doing, you are benefiting yourself by it ten times as much as you are the publishers. Summer is peculiarly the time for making observations and experiments, and winter the time for communicating them. *Remember the poor*, not only in this month but every month through the year, and especially during the inclemency of winter. You need not give so much to them outright, but endeavor to put them in a way of making themselves comfortable, by affording them employment, by which you may be benefited while doing them good. You thus confer on them a triple benefit, by furnishing them the means of comfortable subsistence, teaching them to help themselves, and avoiding the habit of receiving *charity*, which insensibly weakens their sense of self-dependance.

Stock now require increased attention. They must be well housed, or at least protected against wind, with a shelter to which they can resort in storms, well supplied with salt, and abundance of water if possible in the yard, where they can get it when they want, and without wearying themselves in looking for it, and wasting their manure by dropping it in the road, or by a running stream or pond, where it will all be lost. Their feed should be regular, and given them as near stated times as possible. They look for their food then at certain hours, and are not uneasy and fretful till the customary period arrives, when they again fill themselves, and rest quietly, digesting their food till it is time to look for another supply. If brought up in regular habits, brutes are much better time-keepers than many are disposed to consider them, who have not observed closely their intelligence. Now is a good time to break steers and colts, while the roads are smooth and hard. They ought to be early accustomed to handling and the halter, and be gently treated, by which they are more disposed to yield to the wishes of their master. If they have been always used to good treatment, they will acquire a confidence in their keepers, and the more readily submit to their guidance. 'Tis always better to train them with strong, well-broken animals. Sympathy has more to do with the brute creation than they have credit for generally, and the good habits and orderly behavior of the older animals they have been accustomed to treat with deference, will not be without its wholesome effect on them. Young animals in being broke err more from ignorance than obstinacy or ill-temper; patiently and gently teaching them is the best method to pursue.

---

[*] These were shown with the sheep at the State Fair, and I should now forward them, accompanying this, had they not accidentally been mislaid.

[†] I erroneously stated in the January Cultivator that Fortune was bred by Mr. Jewett.

This is the best month for spreading out hemp for dew-rotting, in the latitudes below 40°, as it gets a whiter and better rot than if spread earlier.

Kitchen Garden.—Every fine day uncover the frames in which are lettuce and cauliflower plants, otherwise they will become spindling from want of air. Hot beds can now be made for forcing asparagus for the table in January. If the ground is open, continue trenching for spring crops. When the ground is frozen, cart manure, repair fences, clean seeds, prepare tools for spring. Provide pea-sticks, bean-poles, &c., and finish all that will be required in the spring, and which can be done when the ground is frozen.

Fruit Garden and Orchard.—Finish those things which may have been omitted the previous month. If the weather continues open, digging and plowing may be done advantageously. Perform any work that may tend to forward your business in the spring.

Flower Garden and Pleasure Grounds.—Continue to protect your beds of bulbs and also flower-beds and shrubs as directed in last month. Should the weather continue open in the early part of this month, bulbs may still be planted. They should not be left as late as this, but if such has been the case, they had better be planted now than left until spring. Now carefully protect seedling bulbs. The more tender kinds of trees can have their roots protected from frost, by laying manure or long litter about them.

SOUTHERN CALENDAR FOR DECEMBER.

The closing month of this year is one in which every agriculturist should take an interest, and for many useful hints we will refer the reader to the northern calendar for this month.

Cotton-picking will probably occupy this month until Christmas, when this business will have been completed, if the culture has been well managed, and the season favorable. It would be well to start your plows and break up ground for corn; let nothing but cotton prevent—not even cleaning; for plowing is only one job; yet, if done soon, it is generally advantageous, and if bad weather should set in, when it must be done, time will be lost and a drawback ensue, whereas by plowing in time, cleaning can be done later.

In weather not employed about other labor more important, manure and trim all kinds of vines and fruit trees, except the orange tribe. Transplant evergreens and other trees, sweet briars, honeysuckles, jasmines, &c.; sow late peas and beans, and set out onions for seed; set all hands at work in cleaning up for other crops, picking up limbs, grubbing, cleaning up hollows, sides of bayous, cutting down cornstalks with hoes, gathering materials for making manure, &c., &c.

If you do not live in the immediate vicinity, say five or six miles, from a sugar plantation, by all means keep bees. This can be rendered one of the most productive branches of business of the day. Procure a few swarms at first, and they will soon multiply to any extent required. Use sections of hollow logs, four or five feet long, for hives, if you have no other more convenient materials to make them of, and allow the bees to work over the honey a second time, that you may avoid the injurious effects in eating honey which may have been gathered from poisonous flowers. If the above-named class of hives be used, there will be no necessity for killing the bees; for when the hives are filled with honey they can be removed without harm from the end opposite to that in which the bees are at work, and they will immediately go to work and fill the vacancy. In most part of the southern states bees may be kept at work during the winter. If there are not flowers for them, they can be made to work over the bad honey collected the season before.

This is also a busy month for the sugar-planter. He will be active in cutting and carting his cane with all possible despatch; and he should employ one or more practical and intelligent men to conduct the operations of the mill. In the manufacture of sugar, we know of no better method than that given by Professor Mapes in a letter to Hon. H. L. Ellsworth, from which we make the following extract:

1st. To cut the cane as ripe as possible; but before any acetic acid is formed; litmus paper, touched to the fresh-cut cane, will turn red if acid.

2d. Express the juice without loss of time, as every moment after cutting will deteriorate its quality.

3d. A small quantity of clear lime-water, say one quart to a hundred gallons of juice, should be added the moment it is expressed, unless the juice shows acidity with litmus paper; in that case, no lime should be used, but a solution of sal soda, or soda ash should be added, until it is precisely neutral.

4th. When the juice is neutral, free from excess of acid or alkali, it should be evaporated in such an apparatus as would finish its charge in 30 minutes; if the boiling power is too small, good crystallization can not possibly be obtained.

The whole time occupied from the cutting of the cane to finishing its boiling should not exceed one hour.

5th. To know when the boiling is finished, place a thermometer in the kettle, and continue to evaporate until it stands at 239° Fahrenheit. If, when placed to run off after cooling, it should be found too freely boiled, the next time boil to 240°, or, if too light to run off, to 238°, and so on.

6th. The kettle or boiler should be so arranged, that the moment it is done its charge should be thrown into a cooler, capable of holding a number of charges. The first charge should be left in the cooler without stirring, until the second charge is thrown in; then with an oar scrape the crystals found on the side and bottom of the cooler loose, and gently stir the whole mass together: the less stirred the better; so continue at the letting in of each charge, to stir gently; and when all is in the cooler, let the whole stand until it cools down to 175°; then fill out into sugar moulds of a capacity not less than 14 gallons. When cooled in the mould sufficiently, say fourteen hours, pull the plug out of the bottom of the mould, and insert a sharp point, nearly as large as the hole, some six inches; withdraw the point, and stand the mould on a pot to drip.

7th. If the sugar is intended to be brown, leaving it standing on the pot for a sufficient length of time, in a temperature of 80°, will run off its molasses and leave it in a merchantable shape; it will probably require twenty days. It can then be thrown out of the moulds, and will be fit for use. When moulds can not be obtained, conical vessels of wood or metal, with a hole at the apex, will answer equally well.

Conclusion.—At the close of the year many persons employ themselves in reviewing the events of the past—their acquirements—their well or ill-spent days—or their hours of idleness and inattention. Good resolutions for the future guidance naturally follow; and to such, kind reader, we most heartily join our warmest wishes for permanent success—trusting that each of you who thus have resolved, may go on, adding "flower to flower and knowledge to knowledge," until you blossom in the garden where no good resolutions are blasted, and where no flowers either wither or fade.

FOREIGN AGRICULTURAL NEWS.

By the steamship Britannia we are in receipt of our European journals to the 5th of November.

Markets.—*Ashes.* The business in Pots has been comparatively trifling the past month, though at a slightly advanced rate; Pearls have been brisk, and considerable transactions in them. *Cotton* remains the same as at our last, and the sales languid; if any change should take place, the market evidently portends a trifling reduction. Stock on hand at Liverpool, on the 1st of November, 854,000 bales, against 716,000 at same period last year. *Flour* has advanced 6d. per barrel. *Provisions.* American Beef is in great favor in England, 2,700 tierces having been sold the past month, an amount considerably greater than during any similar period since we commenced exportations. The stock on hand was light. We have only to exercise a little more care in cutting and putting up our beef, to monopolize the British market. Pork is less in demand. The reason of this simply is, our hogs packed for the English market are too large and too fat. They want nothing there to exceed 200 lbs. weight, and wish the fat on the sides well intermixed with lean, such as a partially fatted young Berkshire usually makes. *Lard* in good request, and has slightly advanced. *Tallow*, fair sales. *Cheese* is very active, the demand thus far exceeding the supply. *Kentucky Hemp* of a good quality is quoted at £27 ($131) per ton. *Indian Corn* 25s. per quarter (75 cents per bushel). *Rice* without change. *Turpentine*, an important advance. *Tobacco* dull.

Money was in more demand, and the rates of discount had advanced from 2½ to 3 per cent.

American Stocks. Nothing doing worthy of notice.

Trade was very active, the manufacturers having more orders for three months to come than they can supply.

The Weather for seed sowing was propitious, and it is anticipated that a greater breadth of wheat will be sown this year than ever yet known in the British isles. A good growth of aftermath had followed the excessive drought, which has lessened the price of hay.

Professor Liebig.—This distinguished chemist has been making another visit to Great Britain, and was hospitably received wherever he went. He made an admirable speech at a public dinner given him at Glasgow, and has now returned to Germany, the duties of his professorship forbidding a longer stay abroad. We wish he might be tempted to take a trip to the United States another year.

Smut in Wheat.—The opinion which now obtains is, that the disease is produced by the minute seeds of a parasitic fungus, which, being carried by the wind, enter the plant by the fine openings of the epidermis or outer skin, and are propelled by the rising juices to every part of it, and eventually convert the recently formed grain into a useless and injurious mass.

Prairie Roses.—This is a new group of climbing roses, which promises to be of much interest. Mr. Samuel Feast, of Baltimore, U. S., has had the pleasure of raising the abovenamed varieties from the seed of the single Michigan rose, rosa rubifolia; they are all of vigorous habits, making shoots in one season more than 12 feet in length. No. 3 is the most perfect and beautiful of the whole, giving clusters of flowers containing from twelve to twenty each; at first they are finely cupped; in a day or two they become imbricated, like those of the Duke of Devonsire. It seems to resist the hottest sunshine, and the flowers remain on the plant for a longer period than usual with any other rose: in wet weather, however, they are not at all bright in color, as was the case with some that bloomed the past summer; this has been named also Beauty of the Prairies. Rivers is that name given to it by Mr. Feast. No. 2 only occasionally gives autumnal flowers. No. 1, owing to most of the imported plants dying, is more scarce than the other varieties. All these roses are perfectly hardy; they will form fine pillars and pendulous standards.—*Catalogue of Selected Roses by T. Rivers.*

Von Thaer's celebrated System of Agriculture has been translated by Messrs. Shaw & Johnson, and will soon be issued from the London press.

Stock in Western Australia in 1842.—Horses, 1,096; horned cattle, 4,122; sheep, 60,380; goats, 5,613; swine, 1,913; English population, 3,649.

Horses for Germany.—Several large exportations have just been made to Germany, selected principally from Yorkshire.

Test for Sulphate of Ammonia.—Heat a piece of iron to a moderately red heat, and having placed upon it a small quantity of the sulphate of ammonia, if the same be genuine, it will immediately all volatilize; if not genuine, the impurities will remain. This simple method can be easily applied by every one, and will be the means of saving farmers from frauds.

Comparative Value of the Potato.—One hundred pounds of potatoes are equal, for nutriment, to:

	lbs.
Meat without bone, - - - -	25
Beans, - - - - - -	28
Wheaten Bread, - - - -	35
Parsnips and Carrots, - - - -	190
Turneps, - - - . - -	300
Cabbage, - - - - - -	400

The experiments of Berry & Herring establish the fact that 3 lbs. of potatoes are equal for nourishment to 12 ounces of bread and 5 ounces of meat.

Value of Irrigation.—A small field of poor and almost valueless land in Scotland being irrigated, the second year the burthen on an imperial acre being weighed, it was found to have yielded 9,680 lbs. of well dried hay.

Hints to Lovers of Flowers.—A most beautiful and easily attained show of evergreens in winter may be had by a very simple plan, which has been found to answer remarkably well on a small scale. If geranium branches are taken from healthy and luxuriant trees just before the winter sets in, cut as for slips, and immersed in soap and water, they will, after drooping for a few days, shed their leaves, put forth fresh ones, and continue in the finest vigor all the winter. By placing a number of bottles thus filled in flower baskets, with moss to conceal the bottles, a show of evergreens is easily ensured for a whole season. They require no fresh water.

Earliest Known Potatoes.—Mr. Sterling of Kenmure, Scotland, states, that seedling potatoes were raised by Gerard, the English botanist, in 1590. This is 20 years earlier than they were introduced into Ireland by Sir Walter Raleigh.

Chinese Poultry Yards.—Immense numbers of ducks are reared by that part of the Chinese population who spend their lives in boats upon the rivers; and these birds, salted and dried, form one of the chief articles of diet in the celestial land. They are kept in large cages or crates, from which, in the morning, they are sent forth to seek their food upon the river banks.

A Great Layer.—A small common hen, the property of Mr. Grierson, slater, Dunbar, has, from the commencement of the laying season last spring till the close of the present harvest, produced the wonderful number of two hundred and eight eggs.

Food Necessary to Supply the Waste in Animals.—Practice says that an ox requires 2 per cent. of his live weight in hay per day; if he works, he requires 2½ per cent.: a milch cow, 3 per cent.; a fatting ox, 5 per cent. at first, 4½ per cent. when half fat, and only 4 per cent. when fat; or 4½ on an average. Sheep grown up take 3½ per cent. of their weight in hay per day to keep in store condition; and growing animals should never be stinted. Science has ascertained, by the most carefully-conducted experiments, that a full-grown man voids, in his urine alone, about ½ oz. of nitrogen every 24 hours, and that a small quantity passes off in the solid excretions and by the skin. The carbon consumed by the lungs to keep up animal heat, averages about 11 ounces in the 24 hours; and the saline and earthy matter voided is in direct proportion to the amount taken in the food. It appears that the food consumed by an ox, horse, or sheep, is in direct proportion to their weights when compared with man. Hence we find that an ox would require, to replace the daily loss of muscular fibre, from 20 to 24 ounces of dry gluten or vegetable albumen, which would be supplied in

120 lbs. of turneps
115 lbs. of wheat-straw
75 lbs. of carrots
67 lbs. of potatoes
20 lbs. of meadow-hay
17 lbs. of clover-hay
12 lbs. of pea-straw
12 lbs. of barley
10 lbs. of oats
5 lbs. of beans.

The consumption of carbon by a cow amounts to 70 ounces; and that of a horse to 89 ounces on an average in 24 hours, which is supplied by the starch, gum, and sugar of the food consumed. Fatty matter is required to supply the fat of the animal, and this also exists more or less abundantly in all vegetable food. Earthy phosphates and saline substances are found in the inorganic portion of all vegetables, and these supply the daily waste of bone, &c., of the body. Hence we see that the animal requires a variety of substances, all of which exist in greater or less abundance in its daily food.

Table showing the relative value of different articles of food, as ascertained by practice; good meadow hay being taken at 100.

Hay, - - -	100	Carrots, -	250 to 300
Clover hay, -	80 to 100	Turneps, - - -	500
Green clover, -	450 to 500	Cabbage, -	200 to 300
Wheat straw,	400 to 500	Peas and beans,	30 to 50
Barley straw,	200 to 400	Wheat, - -	50 to 60
Oat straw, -	200 to 400	Barley, - -	50 to 60
Pea straw, -	100 to 150	Oats, - - -	40 to 70
Potatoes, - -	200	Indian corn, - -	50
Old potatoes, - -	400	Oil cake, - -	20 to 40

The above table represents the average results from a number of experiments made in France and Holland.

The two paragraphs above, are selected from a lecture read before the Gloucester Farmers' Club by Mr. Gyde.

To Preserve Grapes, &c.—Procure some tin cases of any convenient size, and put in a layer of dry sand or charcoal and then a bunch of grapes, until the case is full; seal down the lid and make all air tight, and bury them to any convenient depth in the ground. This plan will likewise answer for late cherries, plums, gooseberries, currants, &c. These fruits in some gardens are retarded in their time of ripening, by being covered with mats or nets, which is an excellent plan, and ought to be more generally adopted, as it insures a succession. Grapes, peaches, and apricots, in the open air, may be kept for some time hanging on the trees after they are ripe, by the same means, but their flavor will not be good. Red and white currants, in the same manner, will even keep good till the end of December. Ice-houses have been recommended for preserving fruits; but they are objectionable, on account of the damp moisture which they contain. A dry, cool, and airy room, free from all atmospheric changes, is the only place where fruits can be preserved for any length of time.

Shell Fruit, as walnuts, nuts, chesnuts, &c., may be preserved for a year or two by being divested of their outer shell, and thoroughly dried. In jars, or tin cases, put in a layer of charcoal or dry sand, then a layer of nuts. Proceed in this way until they are full, properly securing each lid, to prevent the admission of air; when finished, bury them in the open ground, or in some cool and dry cellar.—*Gardener's Chronicle.*

Extraordinary Production of Peas.—In the course of last week, as I was taking in some peas for seed, curiosity induced me to count the number produced from several peas separately; and among others, I give you the following as a sample:—I found one pea had produced 94 pods, containing altogether 344 peas; another 99 pods, containing 368 peas; a third had produced 102 pods, containing 418 peas; and a fifth had produced 105 pods, containing altogether 432 peas. The lengths of the haulm, measured from the ground upward, are as follow—first, 2 ft. 2 in.; second, 2 ft. 10 in.; third, 2 ft. 6 in.; and fourth, 3 ft.

Extraordinary Produce.—A few days since, Mr. Jackson, of Borwick Hall, was in a field of barley on his farm, when he found a single barley-corn which had thrown up seventeen stems, on which were no fewer than 550 corns! The field was thinly sowed where this plant grew.—*New Farmers' Journal.*

To Increase the Scent of Mignionette.—Keep it from flowering for a year, and it becomes a shrubby plant and perennial; it is also much more powerful as to scent.—*Ib.*

Pea 3000 Years Old.—Mr. Grimstone, of the Highgote Herbary, has succeeded in rearing peas from an Egyptian pea found in a vase in a mummy tomb, probably 3,000 years old! He says of it: This pea stems right and left, the mother stems being very strong, so that I should imagine them capable of standing without the use of sticks. This pea is in height about three feet, being fourteen inches from left to right; its tendrils are wiry, and of sufficient strength to keep each other in a standing position when planted in high rows. Its principle in bearing is curious, having its pod only on one side, so that it appears something like a grape-vine in miniature.—*Ib.*

Wash for Sunburns and Chilblains.—A small portion of honey mixed with lukewarm water, and allowed to cool, makes an excellent wash for sunburns and chilblains.—*Ib.*

A Grain Reaping, Threshing, and Winnowing Machine, which performs the whole of these operations together, has lately been invented in South Australia. It is said to perform well at the rate of an acre an hour, and requires only two men and two horses to attend it.

This is rather too good a story to be true, for it is quite impossible that so much machinery as these united operations require, could be successfully moved with so little power.

Fat and Muscle.—An admirable article on the causes which appear to determine the production of fat and muscle respectively, according to the present state of our knowledge of animal physiology, may be found in the fifth volume of the Royal Agricultural Society Journal, just issued. It is a prize essay by the veterinary surgeon, W. F. Karkeek, and is well worthy the study of all engaged in breeding domestic animals.

Average Product of Wheat in England.—The Quarterly Review estimates this at 26 bushels per acre.

Editor's Table.

German Method of Making Flowers Grow in the Winter.—We saw off such a branch of any shrub as will answer our purpose, and then lay it for an hour or two in a running stream, if we can find one. The object of this is to get the ice from the bark, and soften the buds. It is afterward carried into our warm rooms and fixed upright in a wooden box or tub containing water. Fresh burnt lime is then added to the water and allowed to remain in it about twelve hours, when it is removed, and water added, with which a small quantity of vitriol is mixed to prevent its putrifying. In the course of some hours the blossoms begin to make their appearance, and afterward the leaves. If more lime be added, the process is quickened, while if it be not used at all, the process is retarded and the leaves appear before the blossom.—*Farmers' Gazette.*

Production of Hemp.—In 1841 and 1842, the entire receipts of hemp at New Orleans were only 1211 bales; in 1842 and 1843 they rose to 15,000 bales, and in 1843 and 1844 they reached 38,000 bales, or about 5,000 tons—the increase being almost exclusively from Illinois and Missouri. It will not be long before hemp, and also wool, will become important articles of export.

Exportation of Indian Corn.—We learn that the quantity of Indian corn shipped from this port to England during the first eight months of 1844, was 190,000 bushels. Same months in 1843, only 35,000 bushels.

To Destroy the Curculio.—A correspondent of the Cincinnati Horticultural Society says, that the experiment of saturating the bark of the plum tree "for a short distance" with spirits of turpentine, and tying a rag dipped therein around the tree, has been found to protect the fruit completely from the ravages of the curculio, when all other plums not so protected were destroyed.—*Dollar Farmer.*

To Make Yellow Butter in Winter.—Put in yolk of eggs just before the butter comes, near the termination of the churning. This has been repeatedly tried, and it makes very fine sweet butter. It is kept by many as a great secret, but its great value requires publicity.—*Boston Cultivator.*

Heavy Yield of Wheat.—Mr. James M. Underwood, of the town of Middlesex, in this county, cut fifty-two bushels and fifty-six pounds of wheat upon one acre of ground, selected from about thirty, which he thinks will yield nearly the same amount.—*Pen Yan Democrat.*

To Preserve Butter without Salting.—The Arabs melt their butter over a slow fire, which expels all the watery particles; it will then keep without salt; and the Irish have adopted, with success, a similar mode for exportation to the East Indies.—*South Western Farm.*

Linseed Oil.—The Cincinnati Gazette states, that there are five linseed oil mills in that city, and another one in the course of erection. They are capable of making, in the aggregate, 900 gallons of oil per day. Cincinnati supplies the whole west, including New Orleans and Mobile, with the article. The manufacture of linseed oil for export is a new business in the west. It is only a few years since it was obtained from the east in large quantities, for western consumption.

Clay on Trees.—Mr. Timothy Hill of Wrentham, who has much experience in grafting and in nursing trees, tells us he finds clay an excellent article to apply to the bodies of apple-trees after scraping off the moss and the rough bark; he prefers this to a wash with potash water.

He also says he has killed all the lice, called aphides, that are so very troublesome on the extremities of young trees, by one application of clay. We hope our friends in great numbers will make trial of this remedy, as ley can not be used on the tender twigs and leaves of trees.—*Mass. Plowman.*

We can not see how clay can be applied to the tender twig either, without great labor and perhaps some injury.

Medical Power of Ash.—It is known to some of our readers that liquor from white ash bark is used for sheep that have been poisoned by eating lambs-bane. Mr. Adam Capen of Stoughton, tells us there are on his farm two kinds of white ash nearly resembling each other. That the bark of one is valuable, and the liquor from it is certain cure for poisoned sheep; while the bark of the other is worthless. Will some of our readers give us a hint on this subject, and a description of the true medical kind?—*Ib.*

Biography of an Extraordinary Porker.—We give below from the New England Farmer an extract from a report of the committee on swine at the late meeting of the Essex Agricultural Society. We presume it is from the pen of the chairman, F. Poole, Esq. If the tribe of *sus aper* don't get immortalized, it will not be for want of comic humor in the histories and descriptions of him by the wits of old Massachusetts. It is apparent now that the lamented Lincoln left his mantle behind him.

"Linn, too, has her share of swinish honors, derived from the extraordinary merits of a single individual of the race, of whom the committee have it in their power to present a biographical sketch. We are indebted to Mr. John Alley 3d, under whose patronage this individual was reared and educated, for some particulars of his life.

"Of his origin we know but little, except that he was the *son* of his *mother,* who died suddenly when he was a few months old and left him an early orphan. He became remarkable for his rapid growth and the excellence of his appetite, and soon arrived at that middle age of swinehood when his porkship appeared a living epitome of good nature and good living. He continued to expand in size until he became a Daniel Lambert of the race, and possessed *great weight* in swinish society. He was a *solid* character, and his specific *gravity* was only equalled by the *gravity* of his demeanor: indeed, there was nothing waggish about him—but his *tail.* He now became a worthy member of the I. O. of Fat Fellows, and attained to their highest degree. His corpulency prevented him from travelling, and although he had never been to *roam* (Rome), he was familiar with the rich stores of ancient and modern *Grease.* The state of the money market gave him no concern, and he cared little for the rise and fall of *stocks*—except *corn-stalks,* which he always appeared anxious to *get down.* He early acquired a disgust for party politics, by observing the greediness with which some partisans have thrust their snouts into the public swill pail. He even thought that some aspiring individuals had much better have a sty in their eye than the White House at Washington. In his political views there seemed to be something like inconsistency. He was in favor of protection, and was a ravenous advocate of home consumption. He also favored large corporations, and at the same time was a strong advocate of retrenchment, and delighted in cutting down *celleries.* He never was a candidate for any public station, and it is believed that his modesty would have prevented him from accepting the offer of any office, from that of Committee on Swine down to the President of the United States.

"Notwithstanding he was ten feet *long,* from extremity to extremity, the event proved he was not *long* for this world, and in his last extremity no friend was found to save him from the hand of the assassin. He was rapidly increasing in size until the time of his departure, which was in November last, at the age of two years and six months. At the post mortem examination of his remains, it was found that his enormous bulk had reached the weight of more than *twelve hundred pounds!* What prodigality of fatness was there! What a mass-meeting of pork concentrated in a single individual! The county of Essex challenges the world to produce his equal. Mr. Alley informed us, with apparent sincerity, that he subsisted mainly on raw Indian meal and potatoes—but the committee had supposed it more likely that he lived on green turtle soup and pound cake, with an occasional meal of boiled salmon and canvass back ducks."

Great Yield of Onions.—Barnabas Hall, Esq., of Dennis, has raised from little more than five rods of land, 47½ bushels of onions—all of them large enough to make a person cry. This is at the rate of 1,500 bushels per acre.—*Yarmouth Register.*

Great Yield of Potatoes.—Mr. Thacher Clark of Dennis, has raised the present year, from one rod of ground, six bushels of potatoes, being at the rate of 960 bushels to the acre. Two potatoes of the size of a hen's egg were placed in each hill. One of the hills produced one half a bushel of potatoes—one potato weighed 2¼ lbs., and another 2 lbs. 3 ozs. Pretty fair for Cape Cod sand.—*Ib.*

Great Yield of Cranberries.—The same paper above asserts that cranberries have been grown the present year by Mr. Lovell, in small patches of a few square rods, on land which, ten years ago, was a barren waste. We wish Mr. L. would give us the particulars of his treatment of this land, and how he has made it produce such large crops of cranberries.

ECLECTIC MAGAZINE; published by Leavitt, Trow, & Co., 194 Broadway. It gives us great pleasure to commend this excellent work, for we know of none other at all equal to it in the value and variety of its selections. No person who has a desire to keep up with the foreign literature of the day can dispense with the Eclectic Magazine; and it will be found of more interest to our readers in consequence of occasional agricultural articles made up in its miscellany. Perhaps we can not do greater justice to its merits than copying the following reasons from its Prospectus why its should be preferred: 1. It is the *cheapest* Periodical, in its price. 2. It is now the *only Monthly* of Foreign Literature. 3. Its Engravings, by Sartain, are exquisite, and superior to any others—*worth the price of the work.* 4. It is *well established,* and beyond all rivalry in its line. 5. It surveys the field of *German and French,* as well as English Periodical Literature, and *selects* from all. 6. It is *elevated and dignified* in its character. 7. It contains, for six dollars a year, or five dollars *in advance,* current funds, remitted to the publishers free of expense or postage, *all the best* articles from *the four Quarterlies,* together with choice matter from the Magazines and Papers. 8. It is printed on *fair paper,* and in type that will *not injure the eyes.* 9. It commends itself to all *persons of taste,* and is represented by good judges, to be "*the best periodical in the world.*" 10. The public *ought* to support a work of this description, in order to supplant the trash of the day.

EUROPEAN AGRICULTURE AND RURAL ECONOMY, from Personal Observation, by Henry Colman, Vol. I., Part II. Published by Arthur D. Phelps, Boston, Mass.; Wiley & Putnam, London, England. Saxton & Miles, 205 Broadway, New York, special agents. Subscription price $5, of which $2 is payable on the delivery of Part I. To be completed in ten Parts. The content of Part II. are:

XIII. Allotment System (continued).
XIV. Quantity of Seed.
XV. Steeping Seeds.
XVI. Spade Husbandry.
XVII. Condition of the Laborers.
XVIII. Progress of Agriculture, compared with other Pursuits.
XIX. Actual Improvements in English Agriculture, including under this head: 1. Draining, Irrigation, and Warping. 2. Live Stock and Vegetables. 3. Agricultural Implements. 4. Application of Steam to Agriculture. 5. Increased Production. 6. Royal Agricultural Society. 7. Agricultural Society of Scotland.
XX. Relation of Landlord and Tenant.
XXI. Game and the Game Laws.
XXII. The Royal Agricultural Society of Ireland.
XXIII. Model Farm and Agricultural School.
XXIV. Dublin Botanical Garden.

In the second Part of his European Agriculture, Mr. Colman has taken up more particularly the subject of practical farming, and proves conclusively, not only greater returns, but a *greater profit* from land placed under a high state of rotatory cultivation; and the examples he gives to substantiate his assertions, are not from the practice of the large farmer and the rich, but from the humbler class, and more especially those cultivating after the best directions of science, from only one to five acres; thus showing that improvement may be made and wealth gained, even by the poorest in means and possessions. We recommend the Allotment System, as detailed by Mr. Colman, to the earnest study of our own farmers, as concerning them more than anything else yet published in his Survey, saving the Model Farm and Agricultural School in the vicinity of Dublin, Ireland. We think in this his second issue, Mr. Colman has made a valuable contribution to agricultural literature, and we regret that we can not now give some extracts from it. We hope, however, that the public will seek them in the work itself, resting assured that it will be no less gratified than instructed in the perusal thereof.

THE AMERICAN POULTERER'S COMPANION.—A practical treatise on the breeding, rearing, fattening, and general management of the various species of domestic poultry; with illustrations and portraits of fowls, taken from life; by C. N. Bement; Saxton & Miles, publishers, 205 Broadway, N. Y.; pp. 379. Price, $1 25. We are glad at length to be able to announce this excellent work, which has been delayed some time passing through the press, from the unusual care bestowed in engraving the illustrations. These are upward of seventy in number, and our readers can judge of their elegant finish and general truthfulness and beauty, from the specimens given from it in our columns in the three preceding numbers of this periodical. Mr. Bement has been a great poultry-fancier for years, and has devoted much time to the breeding, rearing, and diseases of the different varieties of the domesticated feathered race. His book details his knowledge on this interesting subject thus practically acquired; it may therefore be taken as a safe guide in all these matters, and more especially as it is adapted to our own country and its wants; thus making it emphatically *the* American Poulterer's Companion. Mr. Bement has treated the subject in a lively, agreeable style, and the publishers have issued it in the handsomest style of paper and typography. We are persuaded that the value of its contents, and general beauty of its appearance, will ensure it a deserved popularity with all who take any interest in breeding and rearing poultry.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, NOVEMBER 27, 1844.

ASHES, Pots,	per 100 lbs.	$4 00	to	$4 06
Pearls,	do.	4 25	“	4 31
BACON SIDES, Smoked,	per lb.	3½	“	4½
In pickle	do.	3	“	4
BALE ROPE	do.	6	“	9
BARK, Quercitron	per ton	24 00	“	25 00
BARLEY	per bush.	59	“	61
BEANS, White	do.	1 25	“	1 75
BEEF, Mess	per bbl.	5 00	“	7 00
Prime	do.	3 00	“	5 00
Smoked	per lb.	5	“	7
Rounds, in pickle	do.	3	“	5
BEESWAX, Am. Yellow	do.	28	“	31
BOLT ROPE	do.	12	“	13
BRISTLES, American	do.	25	“	65
BUTTER, Table	do.	15	“	18
Shipping	do.	8	“	12
CANDLES, Mould, Tallow	do.	9	“	12
Sperm	do.	28	“	38
Stearic	do.	20	“	25
CHEESE	do.	3	“	7
CLOVER SEED	per lb.	6½	“	8
COAL, Anthracite	2000 lbs.	5 00	“	6 00
CORDAGE, American	per lb.	11	“	12
CORN, Northern	per bush.	52	“	54
Southern	do.	49	“	52
COTTON	per lb.	4	“	8
COTTON BAGGING, Amer. hemp	per yard.	16	“	18
American Flax	do.	16	“	17
FEATHERS	per lb.	28	“	32
FLAX, American	do.	8	“	8½
FLAX SEED, rough	per 7 bush.	9 00	“	9 75
clean	do.	10 00	“	10 50
FLOUR, Northern and Western	per bbl.	4 50	“	4 88
Fancy	do.	5 00	“	5 38
Southern	per bbl.	4 50	“	4 88
Richmond City Mills	do.	5 50	“	5 75
Rye	do.	3 25	“	3 50
HAMS, Smoked	per lb.	5	“	10
Pickled	do.	4	“	7
HAY	per 100 lbs.	40	“	45
HIDES, Dry Southern	per lb.	9	“	11
HEMP, Russia, clean	per ton.	170 00	“	175 00
American, water-rotted	do.	105 00	“	165 00
do -dew-rotted	do.	75 00	“	125 00
HOPS	per lb.	12	“	15
HORNS	per 100	1 25	“	5 00
LARD	per lb.	5½	“	6½
LEAD	do.	3½	“	4
Sheet and bar	do.	4	“	4½
MEAL, Corn	per bbl.	2 44	“	2 75
Corn	per hhd.	12 00	“	12 25
MOLASSES, New Orleans	per gal.	27	“	30
MUSTARD, American	per lb.	16	“	31
OATS, Northern	per bush.	35	“	36
Southern	do.	29	“	31
OIL, Linseed, American	per gal.	68	“	70
Castor	do.	75	“	80
Lard	do.	55	“	65
OIL CAKE	per 100 lbs.	1 00	“	— —
PEAS, Field.	per bush.	1 25	“	— —
PITCH	per bbl.	88	“	1 00
PLASTER OF PARIS	per ton.	2 62	“	2 75
Ground, in bbls. of 250 lbs	per cwt.	1 12	“	— —
PORK, Mess	per bbl.	8 25	“	10 00
Prime	do.	6 50	“	8 12
RICE	per 100 lbs.	3 19	“	3 62
ROSIN	per bbl.	58	“	75
RYE	per bush.	68	“	69
SALT	per sack	1 30	“	1 40
Common,	per bushel	23	“	30
SHOULDERS, Smoked	per lb.	4	“	6
Pickled	do.	3	“	4
SODA, Ash, cont'g 80 per cent. soda,	per lb.	3	“	3½
Sulphate Soda, ground,	do.	1	“	—
SPIRITS TURPENTINE, Southern	per gal.	35	“	38
SUGAR, New Orleans	per lb.	5	“	8
SUMAC, American	per ton	25 00	“	27 50
TALLOW	per lb.	6½	“	8
TAR	per bbl.	1 81	“	1 94
TIMOTHY SEED	per 7 bush.	10 00	“	12 00
TOBACCO	per lb.	2½	“	6
TURPENTINE	per bbl.	2 25	“	2 75
WHEAT, Western	per bush.	95	“	1 03
Southern	do.	95	“	1 00
WHISKEY, American	per gal.	24	“	25
WOOL, Saxony	per lb.	45	“	65
Merino	do.	40	“	50
Half-blood	do.	30	“	35
Common	do.	25	“	30

New York Cattle Market—Nov. 25.

At market, 1300 Beef Cattle (100 from the south), 50 Cows and Calves, and 3000 Sheep and Lambs.

PRICES.—*Beef Cattle* are well sustained, and we quote firm at $4 25 *a* 4 75 to $5 25 *a* 5 75, and $6 for very choice.

Cows and Calves—Sales at $18 *a* $30.

Sheep and Lambs are a little cheaper. We quote sheep at $1 25 *a* $3 50 and Lambs 87 cents *a* $1 50.

Hay—50 *a* 67½ for best quality of loose.

REMARKS.—*Ashes* in fair demand *Cotton* is steady, and the daily transactions of considerable extent. Export from the United States since 1st September last, 203,485 bales; same time last year, 89.425; same time year before, 158, 869. *Flour* is firm, and large exports from this city—15,084 barrels from 1st to 26th inst. The exports from Canada, principally to Great Britain. *a considerable portion the produce of the western states* show that from the 1st of January up to the Ist of August, this season, they amounted to 307,000 barrels flour, and 237,000 bushels wheat—exports the same period last season were only 50,000 barrels flour and 15,000 bushels wheat! We think it a misfortune to both countries that the trade can not be direct. *Hogs*. The opening price this year at Cincinnati—the great pork mart—ranges from $2 50 to $3 00 for small choice lots. Buyers are operating very moderately at these rates, thinking them too high. The farmers on the other hand contend that hogs are not as abundant this year as common, and corn is unusually high and scarce, owing to the great floods of the past season. *Sugar* is heavy, with a downward tendency. The crop in Louisiana was never anything like so large. It is supposed that it will reach from 180,000 to 200,000 hogsheads. The cane is well ripened, and the weather favorable for cutting and grinding. *Tobacco* is in fair request. *Wool* somewhat depressed. We think, however, it will soon recover last September prices.

Money.—A little flurry has taken place this month in the money market, owing to some specie going abroad, and a greater call for discounts. The banks immediately took advantage of these things, and put up the interest to 6 and 7 per cent. As there are plenty of bills now offering to be drawn against cotton and other produce going forward, we are of the opinion that the exportation of specie must stop. But whether it does or not, having imported $23,000,000 last year, the country has plenty to spare. In consequence of the uncertainty of the present tariff being sustained by the dominant political party just coming into power, many orders have been countermanded, buildings in contemplation stopped, and a slight check given to business in general. This, we think, can not last long, and we doubt whether there will be any material change in the policy of the country. The effect of this check, however, will probably make money less in demand for the coming six months, and bring it down again soon to 4½ and 5 per cent. in the cities—in the country it will doubtless continue to rule at legal rates.

Stocks. These have undergone a slight depression, but are gradually returning again to old prices. There was no good reason why they should retrograde.

The Weather up to November 24th was mild with considerable rain. It then set in sufficiently cold for three days to freeze the ground slightly, but is now mild again with a southwest wind.

TO CORRESPONDENTS.—On account of the long index to be made out this month for the whole volume, we were obliged to set up matter for the present No. unusually early; this has left out several interesting communications, which otherwise would have appeared herein. We have no farther room for acknowledgments, and bring our remarks to a close, by assuring our readers that they may expect a rich No. for January, and that this periodical throughout the coming year will be better sustained than ever, and give a greater variety of interesting and instructive matter.

LINNÆAN BOTANIC GARDEN AND NURSERY—Late PRINCE'S.

FLUSHING, L. I., NEAR NEW YORK.

The new Descriptive and unrivalled Catalogue, not only of FRUIT, but also of ORNAMENTAL TREES, SHRUBS, and PLANTS, cultivated and for sale, *at reduced prices*, at this ancient and celebrated Nursery, (*the* IDENTICAL *premises known as* PRINCE'S, *and by the above title for nearly fifty years*,)

☞ **With directions for their Culture,**

may be had *gratis* on application by mail, *post paid*, to the NEW PROPRIETORS, who will endeavor to merit the CONFIDENCE and PATRONAGE of the Public, by INTEGRITY and LIBERALITY in dealing, and MODERATION in charges.

WINTER & Co., Proprietors

Flushing, Aug. 31, 1844.

AGENTS FOR THE AMERICAN AGRICULTURIST.

Israel E. James is our agent for the Southern and South Western States and Florida, assisted by James K. Whipple, Wm. H Weld, O. H. P. Stem, John B. Weld, B. B. Hussey, and Allen E. Brooks.